DOCUMENT RESUME

ED 251 623 CE 040 198

AUTHOR White, Barbara
TITLE Women Apprentices in Hawaii: Characteristics of Females Registered with Pearl Harbor Naval Shipyard and the Hawaii Department of Labor and Industrial Relations.
INSTITUTION Hawaii State Dept. of Education, Honolulu. Office of the Director for Vocational Education.
PUB DATE Aug 84
NOTE 105p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Apprenticeships; Comparative Analysis; Educational Background; Employment Patterns; Enrollment Influences; *Females; Individual Characteristics; *Nontraditional Occupations; *Outcomes of Education; *Participant Characteristics; Participation; Peer Influence; Postsecondary Education; Questionnaires; Racial Factors; Recruitment; Social Support Groups; Socioeconomic Influences; State Surveys; Success; *Trade and Industrial Education
IDENTIFIERS *Hawaii

ABSTRACT

A study examined the characteristics, educational training, and background experiences of women who entered apprenticeship in Hawaii during the period from July 1, 1974, through June 30, 1982. Survey instruments were completed by 118 of 243 female apprentices originally contacted--58 women registered with Pearl Harbor Naval Shipyard and 60 women registered with the Hawaii Department of Labor and Industrial Relations. The Pearl Harbor group made up 70 percent of the total completers and 10.34 percent of the total terminators in the study sample whereas the Hawaii State group made up 30 percent of the total completers and 89.66 of the total terminators. This significant difference in the completion patterns of the members of the two groups was correlated with various personality differences that emerged between the two groups. The Pearl Harbor respondents did not appear to be risk takers; instead, they seemed purposeful and persistent. When asked how they became aware of apprenticeship, the Pearl Harbor women cited female or male friends or talking with female apprentices as their principal and most positive influences. The Hawaii State respondents, on the other hand, reported that their most frequently used mode of obtaining information was through visiting potential job sites. The Hawaii State women also reported that male co-workers harassed them when they were on the job. While the Pearl Harbor women entered apprenticeship with their support groups intact and were consequently encouraged to complete the program, the Hawaii State respondents did not receive any such support. Other factors that appeared to be of possible significance in the differing completion rates of the two groups of respondents were ethnic origin and difficulty of related subjects pursued while in high school. (The survey instrument is appended.) (MN)

HI 8413101

ED251623

STATE BOARD FOR VOCATIONAL EDUCATION

OFFICE OF THE STATE DIRECTOR FOR VOCATIONAL EDUCATION

Women Apprentices in Hawaii: Characteristics of Females Registered with Pearl Harbor Naval Shipyard and the Hawaii Department of Labor and Industrial Relations

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

B White

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CE040198

University of Hawaii • 2327 Dole Street • Honolulu, HI 96822

STATE BOARD FOR VOCATIONAL EDUCATION

Stephen G. Bess
Gladys A. Brandt
Robin K. Campaniano
Dr. Julia Frohlich, Chairperson
Robert M. Fujimoto
James F. Gary
Daniel M. Ishii
Kenneth N. Kato
Stanley Y. Mukai
Dr. Walter R. Steiger, Vice Chairperson
Burt K. Tsuchiya

WOMEN APPRENTICES IN HAWAII: CHARACTERISTICS OF FEMALES REGISTERED WITH PEARL HARBOR NAVAL SHIPYARD AND THE HAWAII DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS

RESEARCH COORDINATING UNIT
OFFICE OF THE STATE DIRECTOR FOR VOCATIONAL EDUCATION
HONOLULU, HAWAII

AUGUST, 1984

Printed by special permission.
Copyright © 1984 by Barbara White,
Honolulu, HI. All rights reserved.

Preface

During the past few years, efforts have been made to increase the number of women in apprenticeship and other male-dominated training programs and jobs. Federal legislation such as Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972 has been enacted to facilitate the removal of written employment and educational policies and practices which may exclude women or men from enrolling in occupational preparation programs and obtaining employment in occupations traditionally considered for one sex only.

However, changing admission and employment policies to comply with federal and state equal opportunity regulations has not brought about a significant increase in the number of women in apprenticeship programs in Hawaii. While administrators of apprenticeship programs under the aegis of Pearl Harbor Naval Shipyard and the Apprenticeship Division of the Hawaii Department of Labor and Industrial Relations have initiated recruitment efforts to encourage the participation of women in apprenticeship, it is not known if or which promotional activities are effective. Furthermore, no information is available concerning the characteristics, educational training, or background experiences of women who chose to enter apprenticeship. Similarly, little or no research has been conducted to identify factors which influence women to complete their apprenticeship programs.

This study was completed to identify the characteristics, educational training, and background experiences of women who entered apprenticeship in Hawaii during the period from July 1, 1974, through June 30, 1982. The questions on the survey instrument used in this study, and thus the resulting information, were designed to be of

practical and immediate use to those interested in improving opportunities for women. It is our sincere hope that this document will provide both the data and the impetus to implement programs which will increase the number of women entering and completing apprenticeship.

Julia Frohlich

Dr. Julia Frohlich, Chairperson
State Board for Vocational
Education

TABLE OF CONTENTS

PREFACE..... i

LIST OF TABLES..... v

INTRODUCTION..... 1

Purpose of Study.....10
Research Questions Investigated.....10
Limitations.....11

METHODS AND PROCEDURES.....13

Survey Instrument.....13
Data Collection.....13
Data Analysis.....14

RESULTS.....17

Research Question 1.....17
Research Question 2.....22
Research Question 3.....29
Research Question 4.....39

CONCLUSIONS AND RECOMMENDATIONS.....41

Conclusions.....41
Recommendations.....48
Recommendations for Secondary and Postsecondary School Systems.....48
Recommendations to the Division of Apprenticeship, Hawaii Department of Labor and Industrial Relations.....50
Recommendations to Pearl Harbor Naval Shipyard.....51

APPENDICES

A. Survey Instrument.....53
B. Letter Attached to Survey Instrument.....60
C. Responses to Open-ended Survey Questions and Additional Remarks Provided by Respondents.....61

REFERENCES.....91

LIST OF TABLES

Table		Page
1	New Registrations and Resumptions of Apprenticeship with the Hawaii Department of Labor and Industrial Relations for each Fiscal Year 1974-75 through 1981-82	4
2	New Registrations and Resumptions of Apprenticeship with the Pearl Harbor Naval Shipyard for each Fiscal Year 1974-75 through 1981-82	6
3	Status of Female Apprentices Registered with the Hawaii Department of Labor and Industrial Relations for each Fiscal Year 1974-75 through 1981-82	8
4	Status of Female Apprentices Registered with the Pearl Harbor Naval Shipyard for each Fiscal Year 1974-75 through 1981-82	9
5	Comparison of Selected Demographic Characteristics and Background Experiences of Women in Two Established Apprenticeship Programs in Hawaii	18
6	Comparison of Positive and Negative Influences Experienced by the Greatest Percentage of Women Entering Two Established Apprenticeship Programs in Hawaii	24
7	Influences Experienced When Entering Apprenticeship: Statistically Significant Differences Found for Women Entering Two Established Apprenticeship Programs in Hawaii	26
8	Comparison of Positive and Negative Influences Experienced by the Greatest Percentage of Women While Participating in Two Established Apprenticeship Programs in Hawaii	32
9	Influences Experienced While in Apprenticeship: Statistically Significant Differences Found for Women Participating in Two Established Apprenticeship Programs in Hawaii	36
10	Composition of Completions, In-Program Status, and Terminations of Respondents in Two Established Apprenticeship Programs in Hawaii	40

INTRODUCTION

The most striking demographic change in the U.S. labor force in recent decades has been the dramatic increase in the participation of women. In 1950, women accounted for approximately 30 percent of the labor force; by 1982, they accounted for 43 percent (U.S. Department of Labor, 1983).

Women are on the payrolls of every major industry group but are especially concentrated in the service-producing sector of the economy. They also remain concentrated in the traditionally female occupational fields. In 1982, 99 percent of secretaries, 96 percent of nurses, and 82 percent of elementary school teachers were women (U.S. Department of Labor, 1983).

In contrast, women make up a little over one-fourth of the workers in the goods-producing industries and remain particularly underutilized and underrepresented in the skilled trades, including those requiring a period of apprenticeship. From 1900 to 1960, each decennial census showed that female workers held only two or three percent of the jobs in the skilled trades nationwide (U.S. Department of Labor, 1977). The only variation in this rate of participation was during the World War II production years when legendary "Rosie-the-Riveters" held their own as welders, machine operators, and shipfitters. When the war ended, most women were gradually phased out of the skilled jobs as men returned to the work force.

During the past few years, efforts have been made to increase the number of women in apprenticeship and other male-dominated training programs and jobs. Federal legislation such as Title VII of the Civil

Rights Act of 1964 and Title IX of the Education Amendments of 1972 has been enacted to facilitate the removal of written employment and educational policies and practices which may exclude women or men from enrolling in occupational preparation programs and obtaining employment in occupations traditionally considered for one sex only.

The U.S. Department of Labor addressed the particular issue of women in apprenticeship with the Equal Employment Opportunity in Apprenticeship and Training regulation published in May, 1978. This regulation requires affirmative action to increase the number of women in apprenticeship. Specifically, the May 12, 1978, Federal Register (p. 20761) states that:

> The Department of Labor has examined the Status of Women in apprenticeship programs and has concluded, based on their [women's] participation rates, that 29 CFR Part 30 should be amended to require that written affirmative action plans for apprenticeship programs cover women, including establishment and implementation of goals and timetables.

The Federal Register (May 12, 1978, p. 20761) further states that:

> Historically, women have had only limited participation in apprenticeship programs, which is how many skilled craftworkers enter their jobs.
>
> In 1976, of the 11 million skilled blue-collar workers, only slightly over a half million (545,038) were women. Nearly 165,000 of these women were bakers; tailors; upholsterers; and decorators and window dressers constituting, respectively, 37.2, 32.1, 28.6, and 70.6 percent of the total employed. On the other hand, the proportion of women carpenters, electricians, painters, plumbers, machinists, mechanics, stationary engineers, and a few other skilled trades ranged far less than 1 percent to about 3 percent of the total. Although the number of women apprentices increased by 74 percent in one year (1974-75), they still represented only 1.2 percent of the total number of apprentices registered.

In compliance with this regulation, the Apprenticeship Division of the Hawaii State Department of Labor and Industrial Relations promulgated A State Plan for Equal Employment Opportunity in

Apprenticeship Programs. The plan includes provisions for outreach and positive recruitment which would reasonably be expected to increase female participation in apprenticeship. Recruitment activities undertaken by the Division include sponsorship of career fairs, visits to secondary and postsecondary schools to advise women of apprenticeship opportunities, development of tape-slide shows featuring women apprentices, placement of ads in newspapers notifying the public that women are wanted in apprenticeship, and the dissemination of a wide variety of printed materials such as brochures and flyers highlighting women in apprenticeship programs. While there has been some increase in the number of female apprentices since the adoption of the plan, it is difficult to ascertain the cause of the increase.

As Table 1 shows, women still comprise a minority of the enrollment in programs registered with the Hawaii State Apprenticeship Division. In fact, the number of females as compared with the total registered apprentices has never been above 6.87 percent.

The State Plan for Equal Employment Opportunity in Apprenticeship Programs is limited to programs registered with the Apprenticeship Division of the Hawaii Department of Labor and Industrial Relations. The Pearl Harbor Naval Shipyard has a federally-funded apprenticeship program and is therefore not under the jurisdiction of the Hawaii Apprenticeship Division and does not have to conform to the goals and timetables in the State Plan for Equal Employment Opportunity in Apprenticeship Programs.

Pearl Harbor Naval Shipyard does conform, however, to a number of Executive Orders and laws designed to assure equal employment opportunity for federal service jobs. Most notable among these orders

Table 1

New Registrations and Resumptions of Apprenticeship with the Hawaii Department of Labor and Industrial Relations for each Fiscal Year 1974-75 through 1981-82

Fiscal year	Males/females registering	Females registering	Percent females registering
1974-1975	1,598	6	.38
1975-1976	500	1	.20
1976-1977	365	5	1.37
1977-1978	455	11	2.42
1978-1979	931	64	6.87
1979-1980	808	31	3.84
1980-1981	780	22	2.82
1981-1982	530	11	2.08

Source: Hawaii Department of Labor and Industrial Relations. Division of Apprenticeship, Annual Report of the Apprenticeship Division. Honolulu: Fiscal Years 1974-75, 1975-76, 1976-77, 1977-78, 1978-79, 1979-80, 1980-81, 1981-82.

and laws are Executive Order 11375 (October, 1967), which established the Federal Women's Program; Executive Order 11478 (August, 1969), which integrated the Federal Women's Program into the overall Equal Employment Opportunity Program; and the Equal Employment Opportunity Act of 1972, which amended the Civil Rights Act of 1964 to include Federal government agencies.

In compliance with Executive Order 11478, Pearl Harbor Naval Shipyard integrated the Federal Women's Program into the overall Equal Employment Opportunity Program with the specific goal of improving employment and advancement opportunities for women in federal service. A primary objective of the Federal Women's Program has been to

increase the number of women in apprenticeship and all other "blue-collar" occupations at Pearl Harbor Naval Shipyard.

To achieve this objective, an Equal Employment Opportunity (EEO) Specialist at Pearl Harbor Naval Shipyard, who is also the manager of the Federal Women's Program, is actively promoting the apprenticeship program and encouraging women to enroll. Recruitment activities include sponsorship of career fairs, visitations to high schools and community colleges to advise women of apprenticeship opportunities, development of slide shows featuring women working in a variety of jobs at the Shipyard, the formation of a traveling panel of women apprentices and male supervisors who speak of their trials and triumphs, and the dissemination of a variety of brochures and flyers emphasizing women in apprenticeship programs at Pearl Harbor Naval Shipyard.

According to the data on Table 2, the percentage of women in apprenticeship at Pearl Harbor has been higher than the participation percentage of women in Hawaii State registered programs. However, the factors contributing to this difference in participation can only be speculated because no evaluation studies have been conducted.

From the data reflected in Tables 1 and 2, it is apparent that changing admission and employment policies in compliance with federal and state equal opportunity regulations did not immediately bring about a significant increase in the number of women in apprenticeship programs in Hawaii. Furthermore, while administrators of both programs have initiated recruitment efforts to encourage the participation of women in apprenticeship, it is not known if or which promotional activities are effective.

Table 2

New Registrations and Resumptions of Apprenticeship with the Pearl Harbor Naval Shipyard for each Fiscal Year 1974-1975 through 1981-1982

Fiscal year	Males/females registering	Females registering	Percent females registering
1974-1975	158	2	1.27
1975-1976	161	7	4.35
1976-1977	208	2	.96
1977-1978	200	5	2.50
1978-1979	228	10	4.39
1979-1980	204	24	11.76
1980-1981	197	21	10.66
1981-1982	222	21	9.46

Source: Pearl Harbor Naval Shipyard, Equal Employment Opportunity Office

While increasing the number of women enrolling in apprenticeship programs is a major goal, it is equally important to increase the number of women who complete their apprenticeship to become journeyworkers. At Pearl Harbor Naval Shipyard, most apprenticeship programs are completed in four years. The length of time it takes to complete programs registered through the Hawaii Apprenticeship Division varies with the particular trade requirements and the employment situation. Generally, state registered apprenticeship programs are completed within two to five years, but most programs are four years in length.

Table 3 provides a summary, by fiscal year, of the total number of completions and terminations of females registered with the Hawaii State Apprenticeship Division. Of the 151 females registered since

July 1, 1974, eight or 5.3 percent have completed their apprenticeship training and graduated to journeyworker status as of June 30, 1982. Another 51 female registrants are still in the program and are, therefore, possible future completers. Terminations total 92 or 60.93 percent of the registrants during the period July 1, 1974, through June 30, 1982.

In comparison, the statistical picture of Pearl Harbor Naval Shipyard female apprentice completions and terminations is quite different. As illustrated in Table 4, 23 or 25 percent of the females registered since July 1, 1974, have completed their training program as of June 30, 1982. Another 58 women (63.04 percent) are still in the program and may possibly become completers. The termination rate at Pearl Harbor Naval Shipyard has been 11.96 percent compared to 60.93 percent of those registered with the Hawaii State Apprenticeship Division.

While there are some obvious differences in the termination and completion rates for female apprentices registered with Pearl Harbor Naval Shipyard and the Hawaii State Apprenticeship Division, the factors influencing these differences are not known. Kane, Dee and Miller, in their 1977 study of women apprentices, speculated that women apprentices in industry (such as Pearl Harbor Naval Shipyard) would have fewer problems than those in construction because the industry or plant apprentices are not isolated from other women at the work site. Therefore, if female apprentices need support or the sense of not being a total outsider, they can find other women in the plant with whom they can discuss their problems and find a social world that is less inimical than the all-male environment at the construction site.

Table 3

Status of Female Apprentices Registered with the Hawaii Department of Labor and Industrial Relations for each Fiscal Year 1974-1975 through 1981-1982

Fiscal year	Number of females registering	Status		
		Terminated	In program	Completed
1974-1975	6	6		
1975-1976	1			1
1976-1977	5	3		2
1977-1978	11	7	0	4
1978-1979	64	50	13	1
1979-1980	31	16	15	
1980-1981	22	9	13	
1981-1982	11	1	10	
Total	151	92	51	8
	100%	60.93%	33.77%	5.30%

Sources: Hawaii Department of Labor and Industrial Relations. Division of Apprenticeship. Annual Report of the Apprenticeship Division. Honolulu: Fiscal Years 1974-75, 1975-76, 1976-77, 1977-78, 1978-79, 1979-80, 1980-81, 1981-82.

Because little or no research has been conducted to identify factors which influence women to complete their apprenticeship programs in Hawaii, program administrators do not know if there are activities or strategies which would reduce the termination rate. Similarly, it is not known if women who complete the apprenticeship program have some common cultural or demographic characteristics, educational training, or background experiences which can be attributed to their success.

Table 4

Status of Female Apprentices Registered with the Pearl Harbor Naval Shipyard for each Fiscal Year 1974-1975 through 1981-1982

Fiscal Year	Number of females registering	Status		
		Terminated	In program	Completed
1974-1975	2			2
1975-1976	7	1		6
1976-1977	2			2
1977-1978	5	1		4
1978-1979	10	1		9
1979-1980	24	5	19	
1980-1981	21	1	20	
1981-1982	21	2	19	
Total	92	11	58	23
	100%	11.96%	63.04%	25.00%

Source: Pearl Harbor Naval Shipyard, Equal Employment Opportunity Office.

While it may be true that many women would still select traditional "women's careers" even if all overt sex discrimination was removed, there may be an increasing number who would choose apprenticeship if more emphasis could be placed on positive influences as identified by female apprentices. Concomitantly, those factors which have had a negative effect on the desire of females to enter and/or complete apprenticeship programs may be minimized.

Purpose of Study

The purpose of this study was to compare the factors influencing the entrance, participation, and completion of women in two established apprenticeship programs in Hawaii. More specifically, women who had participated in apprenticeship programs registered with the Pearl Harbor Naval Shipyard, Hawaii, or the Apprenticeship Division of the Hawaii Department of Labor and Industrial Relations were queried to determine the differences or similarities in their background and experiences as well as their reasons for entering apprenticeship. Responses from the two groups of women as to the deterrents and positive influences experienced while in apprenticeship were also compared. These findings were then analyzed to determine which factors were contributing to the difference in the completion and termination rates of the two programs.

Research Questions Investigated

The research questions addressed in this study were:

1. Are there similarities in the demographic characteristics and background experiences of the women registered in Pearl Harbor Naval Shipyard or Hawaii State Apprenticeship programs?

2. Will the deterrents and positive influences experienced by women entering apprenticeship be the same whether they registered with Pearl Harbor Naval Shipyard or the State of Hawaii Apprenticeship Division?

3. Will the deterrents and positive influences experienced by women while participating in apprenticeship be the same whether they registered with Pearl Harbor Naval Shipyard or the State of Hawaii Apprenticeship Division?

4. Will the demographic characteristics, background experiences, and deterrents and positive influences experienced when entering and participating in apprenticeship be the same for those women who completed the program whether they registered with Pearl Harbor Naval Shipyard or Hawaii State Apprenticeship Division?

Limitations

This study was limited to those women who were registered in an apprenticeship program under the aegis of the Apprenticeship Division of the Hawaii State Department of Labor and Industrial Relations and Pearl Harbor Naval Shipyard, Hawaii, at some point during the period from July 1, 1974, through June 30, 1982. Only those women who registered since July, 1974, were included because this was the first year for which records were kept to classify applicants by sex. The study was further limited to individuals within this group who chose to participate by completing and returning a survey questionnaire.

METHODS AND PROCEDURES

Survey Instrument

A survey instrument was developed specifically for this study (see Appendix A) to determine the factors which influence women to participate in and complete apprenticeship programs in Hawaii. A consideration in determining the questions included in the survey was that the resulting information should be of immediate and practical use to school personnel, apprenticeship administrators, equal employment opportunity specialists, and others interested in increasing the number of women in apprenticeship.

Data Collection

The survey instrument with its cover letter and a return stamped, addressed envelope was sent to 243 women. Two follow-up letters were sent. Both follow-up mailings resulted in additional returns.

Of the 243 questionnaires mailed, 52 were returned as undeliverable and post office officials noted that no forwarding address was available. Of these 52, 6 were addressed to women registered with Pearl Harbor Naval Shipyard and 46 were addressed to women registered with the Hawaii State Apprenticeship Division.

The final return count was 118; 58 from women in the Pearl Harbor category and 60 from women in the Hawaii State category. Thus, there was a 63 percent return rate from the Pearl Harbor population and a 40 percent return rate from the Hawaii State population.

Unfortunately, one questionnaire returned by a Hawaii State respondent contained only the information that she had terminated from the program. Other than providing information about her status in

apprenticeship, this questionnaire could not be used. The N value for the Hawaii State group was considered 59 for all other data analyses purposes.

Because there was no information available on the women who chose not to participate in this study or for those women who could not be reached via a postal service, it is not known if their characteristics or background experiences are similar to those women who answered the questionnaire. This consideration is particularly important for the Hawaii State group because 30.46 percent of the women representing that population and eligible for inclusion in this study could not be located and therefore never received the questionnaire.

Data Analysis

A chi-square analysis was performed for the matrix of possible significant correlations of the data obtained from the completed and returned survey questionnaires. Where possible, a t-test of variance was used to determine significant correlation of means between the Pearl Harbor and the Hawaii State groups.

These nonparametric statistical tests were selected because the response pattern of the participants did not constitute a normal distribution or homogeneity of variance. Furthermore, the chi-square test allowed for considerable flexibility in the construction of contingency tables which therefore permitted the researcher to analyze the data from multiple perspectives.

For both the chi-square and t-test, a .05 ($p < .05$) level of significance was selected. While the .05 level is an arbitrary decision, Tuckman (1972, p. 224) states that "When statistics are

applied by behavioral scientists, the 5 percent level (i.e. $p < .05$) often is considered an acceptable level of confidence to reject the null hypothesis of equal means between the control and experimental groups."

RESULTS

A summary of the findings for each of the four major research questions in this study is presented in this section.

Research Question 1

Are there similarities in the demographic characteristics and background experiences of the women registered in Pearl Harbor Naval Shipyard or Hawaii State apprenticeship programs?

While similar in many respects, there were also some differences in the demographic characteristics and background experiences of the women in the two apprenticeship programs in this study. Based upon responses to the items in this research question, a profile of the respondents from both the Pearl Harbor Naval Shipyard and the Hawaii State Division of Apprenticeship is portrayed in Table 5.

The greatest percentage of women in both programs reported that they attended high schools located on Oahu, Hawaii, where they completed courses in biology, general mathematics, and algebra. Furthermore, the greatest percentage of women in both programs had some postsecondary education which they obtained in institutions located in Hawaii. The majority of women in both programs participated in sports as a hobby. In addition, women from both programs who were parents averaged the same number of children.

A comparison of the greatest percentage of responses to particular survey questions highlights some of the differences between the women in the two apprenticeship programs. More women apprentices

Table 5. Comparison of Selected Demographic Characteristics and Background Experiences of Women in Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor Naval Shipyard		Hawaii State Apprenticeship Division	
	Response	Percent	Response	Percent
Marital Status*	Married	51.72	Divorced, Single or Separated	66.10
Average Age	31 years		32 years	
Number of Children	1.24 Children		1.24 Children	
Ethnicity* $p < .0036$	Asian	39.66	Caucasian	49.15
Location of High School Attended*	Hawaii Oahu, Hawaii	67.24 65.52	Hawaii Oahu, Hawaii	61.02 47.46
High School Courses Taken by 50 Percent or More of Respondents	Biology General Mathematics Algebra Plane Geometry		Biology General Mathematics Algebra	
Attended a Postsecondary Institution $p < .0040$		74.14		50.85
Average Years of Postsecondary Education	2.73 years		2.17 years	
Location of Postsecondary Institution Attended*	Hawaii	65.22	Hawaii	65.63

Table 5 (continued) Comparison of Selected Demographic Characteristics and Background Experiences of Women in Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor Naval Shipyard		Hawaii State Apprenticeship Divison	
	Response	Percent	Response	Percent
Occupational Field Engaged in Prior to Apprenticeship*	Clerical	57.58	Service Clerical	26.73 25.74
Hobby*	Sports	28.95	Sports	32.14

*Greatest percentage of responses.

Note: Probability values are provided for only those comparisons for which there was a statistically significant difference.

at Pearl Harbor Naval Shipyard were married while more of their Hawaii State counterparts were divorced, single, or separated. The Pearl Harbor women were also slightly younger in average age (31 years) than the Hawaii State women (32 years). Their ethnicity was also different in that more Pearl Harbor women were Asian while more Hawaii State women were Caucasian.

Their high school background was similar in most respects; however, there was one course taken by 50 percent or more of the Pearl Harbor women but less than 50 percent of the Hawaii State women. This was plane geometry. In fact, more high school mathematics courses were completed by the Pearl Harbor respondents than the Hawaii State respondents.

Another difference was that more Pearl Harbor than Hawaii State women experienced some postsecondary education. The Pearl Harbor women also earned more certificates and degrees, probably because they averaged more years of postsecondary education than their Hawaii State counterparts.

The highest percentage (57.58) of respondents from Pearl Harbor had been employed in a clerical occupation prior to entering apprenticeship. Hawaii State respondents reported a nearly equal percentage of experience in two occupational areas. These occupational areas were service (26.73 percent) and clerical (25.74 percent).

Thus far, a picture of the women in both the federal- and state-registered apprenticeship programs by highest percentage of responses has been presented. However, the differences between the

two groups which were statistically significant need to be emphasized as well.

First, a statistically significant difference in ethnicity at the $p < .0036$ level was found. This difference was due to the fact that 49.15 percent of the Hawaii State respondents were Caucasian and 39.66 percent of the Pearl Harbor respondents were Asian. Thus, of all survey respondents reporting Asian ethnicity, 67.65 percent were registered with Pearl Harbor. In contrast, 63.04 percent of all Caucasian respondents were registered with Hawaii State.

Pearl Harbor women were more likely than Hawaii State women to have had some postsecondary education experience. A statistically significant difference at the $p < .0040$ level was found for this question.

Although a similar number of respondents from both groups reported that they had held at least one job prior to apprenticeship, there was a significant difference at the $p < .0001$ level in the type of job held. This difference is probably due to the fact that 57.58 percent of the Pearl Harbor respondents were employed in a clerical occupation in at least one job held prior to apprenticeship. No occupational area claimed a majority of the Hawaii State apprentices. In fact, the highest percentage of Hawaii State women claiming experience in one occupational area was 26.73. This was in the service occupations. A similar percentage, 25.74, reported job experience in the field of clerical occupations. Thus, the total percentage (52.47) of types of job experience reported by Hawaii State women in two occupational categories was less than the percentage (57.58) reported by Pearl Harbor women for one occupational category.

Research Question 2

Will the deterrents and positive influences experienced by women entering apprenticeship be the same whether they registered with Pearl Harbor Naval Shipyard or the State of Hawaii Apprenticeship Division?

A summary of the responses to certain items on the questionnaire concerning positive and negative influences experienced by women entering apprenticeship again highlights differences and similarities between the two groups. This information is highlighted in Table 6.

The first similarity identified concerned the person most likely to encourage and the person most likely to discourage the women when they were entering apprenticeship. For both groups of women apprentices, the greatest percentage of responses was tallied for female friend as the person most encouraging and for husband as the person who was the most discouraging.

Both groups were also in agreement that, in gaining admission to apprenticeship, the most helpful high school course they had completed was general mathematics. At the postsecondary level, algebra was rated as the most helpful course.

Respondents from both groups agreed that, based on their work experience, a job in a crafts occupation was the most helpful in gaining admission to apprenticeship. Work in the field of sales was reported as the least helpful in gaining admission to apprenticeship.

The two groups differed in their response as to who provided them information about apprenticeship programs. Most Pearl Harbor respondents felt that male and female friends had equally provided them information. The Hawaii State group felt that female friends were most responsible for informing them of apprenticeship opportunities.

The majority of the Pearl Harbor women claimed that they received their information by talking with female apprentices. They also felt that this method of information sharing was the most encouraging influence. The Hawaii State group thought that visiting potential job sites was most often used to gain information about apprenticeship opportunities and that this source and talking with male apprentices were equally encouraging in their decision to enter apprenticeship. Husband was rated by both groups of women as the most discouraging person in their decision to enter apprenticeship.

The two groups differed in their response as to the most important personal influence in their decision to enter apprenticeship. The most important personal influence identified by the Pearl Harbor group was a desire to try something different. The greatest percentage of Hawaii State respondents felt, however, that job satisfaction was the most important personal influence.

Again the responses reported thus far are merely by greatest percentage. There were also some statistically significant differences which need to be emphasized. These differences are summarized in Table 7.

The first statistically significant difference reported concerns how the women become aware of apprenticeship. Because the Pearl Harbor women reported more sources of information about apprenticeship than the Hawaii State respondents, a significant difference between the two groups resulted ($x^2 = 5.238$, $\underline{df} = 1$, $\underline{p} < .0221$).

Items within this category with statistically significant differences were the Pearl Harbor Log, the Hawaii State Employment Agency, and Unions/Locals. Since these sources are somewhat linked to one apprenticeship program or the other, it is not surprising that

Table 6. Comparison of Positive and Negative Influences Experienced by the Greatest Percentage of Women Entering Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor Naval Shipyard		Hawaii State Apprenticeship Division	
	Response	Percent	Response	Percent
Person Providing Information about Apprenticeship*	Male Friend	34.48	Female Friend	23.73
	Female Friend	34.48		
Mode of Obtaining Information	Talking with Female Apprentices	70.69	Visiting Potential Job Sites	44.07
Encouraging Mode of Obtaining Information*	Talking with Female Apprentices	65.52	Talking with Male Apprentices	28.81
			Visiting Potential Job Sites	28.81
Person Providing Encouragement*	Female Friend	72.41	Female Friend	61.02
Person Providing Discouragement*	Husband	12.07	Husband	11.86
Personal Influence Considered Very Important $p < .0001$	Desire to Try Something	77.19	Job Satisfaction	72.41

Table 6 (continued) Comparison of Positive and Negative Influences Experienced by the Greatest Percentage of Women Entering Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor Naval Shipyard		Hawaii State Apprenticeship Division	
	Response	Percent	Response	Percent
Personal Influence Considered Not Important $p < .0001$	Ability/Aptitude	23.08	Ability/Aptitude	16.95
High School Course Taken and Considered Very Helpful (Only courses rated by 5 or more survey respondents were considered)	General Mathematics	66.67	General Mathematics	54.05
Postsecondary Course Taken and Considered Helpful (Only courses rated by 5 or more survey respondents were considered)	Algebra	80.00	Algebra	72.73
Prior Occupational Experience Considered Very Helpful	Crafts	80.00	Crafts	66.67
Prior Occupational Experience Considered Not Helpful	Sales	100.00	Sales	75.00

*Statistically significant differences were found for one or more items within this category of questions.

Table 7. Influences Experienced When Entering Apprenticeship: Statistically Significant Differences Found for Women Entering Two Established Apprenticeship Programs in Hawaii

	Overall Probability $p <$	Individual Items with Statistically Significant Differences	Reasons for Significant Differences
Person Providing Information	.0221	Husband $x^2 = 6.029$ $p < 0.0141$	Provided More Pearl Harbor Women With Information
		EEO Specialist $x^2 = 9.478$ $p < 0.0021$	Provided More Pearl Harbor Women With Information
		Pearl Harbor Log $x^2 = 14.877$ $p < 0.0001$	Provided More Pearl Harbor Women With Information
		Hawaii State Employment Agency $x^2 = 9.585$ $p < 0.0020$	Provided More Hawaii State Women With Information
		Unions/Locals $x^2 = 7.319$ $p < 0.0068$	Provided More Hawaii State Women With Information

Table 7 (continued) Influences Experienced When Entering Apprenticeship: Statistically Significant Differences Found for Women Entering Two Established Apprenticeship Programs in Hawaii

	Overall Probability $p <$	Individual Items with Statistically Significant Differences	Reasons for Significant Differences
Encouraging/Discouraging Mode of Obtaining Information	.0005	Talking with Female Apprentices $x^2 = 20.750$ $p < 0.0001$	Experienced by More Pearl Harbor Women
Person Encouraging/ Discouraging	.0291	Male Counselor $x^2 = 7.867$ $p < 0.0488$	Encouraged More Hawaii State Women
		Female Apprentices $x^2 = 18.904$ $p < .0003$	Encouraged More Pearl Harbor Women

such differences were found. A fourth statistically significant difference was also found for the item husband. Eight Pearl Harbor women claimed that their husbands gave them information about apprenticeship. Only one Hawaii State woman made a similar claim.

A statistically significant difference at the $p < .0291$ level was found for the question asking who provided encouragement to the women when entering apprenticeship. This difference was due to the fact that Pearl Harbor women reported more encouragement than Hawaii State women in 10 of the 13 items in this question.

Responses to two items within this question were found to be statistically significantly different. First, more than twice as many Pearl Harbor than Hawaii State women indicated that female apprentices had encouraged their decision to enter apprenticeship. This difference was statistically significant at the $p < .0003$ level.

A second significant difference in the question concerning who provided encouragement when entering apprenticeship was found for male counselors. This difference was significant at the $p < .0488$ level because 16.95 percent of the Hawaii State women as compared to 3.45 percent of the Pearl Harbor women felt that male counselors had provided them encouragement. It should be noted that the male counselors which the Hawaii State women (and perhaps the Pearl Harbor women) were probably referring to were Hawaii State Employment Agency personnel and not school counselors. This assumption is made because 15.25 percent of the Hawaii State respondents mentioned the Hawaii State Employment Agency as an important source of information about apprenticeship opportunities. School personnel, such as teachers, received a zero response from the Pearl Harbor group, and only three Hawaii State women felt school personnel had provided them information about apprenticeship programs.

Another statistically significant difference was found between the two groups for the question concerning encouraging and discouraging modes of acquainting the women with apprenticeship. While few women in either group rated any of the modes of acquainting them with apprenticeship as discouraging, the Pearl Harbor women reported more exposure to all of the items listed on the questionnaire. Thus, a statistically significant difference resulted ($x^2 = 17.573$, $\underline{df} = 3$, $\underline{p} < .0005$).

Within this question concerning encouraging and discouraging modes of acquainting the women with apprenticeship, responses to only one item were statistically significantly different. The item talking with female apprentices was reported as encouraging by 65.52 percent of the Pearl Harbor women. Since only 23.73 percent of the Hawaii about apprenticeship, there was a significant difference at the $p <$ .0001 level. The Hawaii State women rated visiting potential job sites and talking with male apprentices as equally encouraging in their decision to enter apprenticeship. Neither of these items, however, resulted in a statistically significant difference between the responses of the two groups.

Research Question 3

Will the deterrents and positive influences experienced by women while participating in apprenticeship be the same whether they registered with Pearl Harbor Naval Shipyard or the State of Hawaii Apprenticeship Division?

As summarized in Table 8, the two groups of women apprentices were in agreement in four of the eleven principal areas of concern in this research question. The greatest number of respondents in both groups rated individual counseling or discussion with a supervisor as not helpful as a coping strategy in dealing with problems in apprenticeship. The two groups were also in agreement that prior experience in a sales occupation was not helpful in doing the work in apprenticeship.

On the positive side, of the respondents who had completed a postsecondary course in algebra, there was a high percentage of very helpful ratings from both groups. Also, of those who had experience in a Crafts occupation, there was agreement that prior job experience in this field was very helpful in doing the work in apprenticeship.

By greatest percentage, the two groups differed in their answers to seven of the eleven concerns in this research question. The first of these differences was in the results obtained from the women as to who provided encouragement once they were in apprenticeship. All of the Pearl Harbor respondents who selected EEO officer, female apprentices, female friend, and sister rated them as encouraging. Three people on the list were rated encouraging by 100 percent of the Hawaii State group who had had contact with these particular individuals. What was interesting in this comparison was that of the four people selected consistently by the Pearl Harbor group as providing encouragement, three were outside the family. On the other hand, all three of the people who were rated by the greatest percentage of Hawaii State respondents as being encouraging had familial ties--brother, children, and sister.

There was also disagreement in the percentages of ratings by the two groups of individuals as to who provided the most encouragement. The greatest number (10) and percentage (22.22) of Pearl Harbor women rated supervisor as discouraging. While the largest number (10) of Hawaii State women also rated supervisor as discouraging, this was only 26.32 percent of all the ratings in that category. Husbands were rated as discouraging by the greatest percentage (40) of Hawaii State respondents.

The obstacle rated by the most Pearl Harbor women as being a problem or somewhat of a problem was lack of familiarity with tools. Hawaii State women, on the other hand, checked teasing and/or harassment on the job as their most frequent problem.

The Pearl Harbor respondents indicated that they utilized each of the five coping strategies listed on the survey instrument more often than the Hawaii State group. Two strategies, talking with women apprentices informally and talking with men apprentices informally, were both reported used by 53 (91.38 percent) of the Pearl Harbor women. Talking with men apprentices informally was also used as a coping strategy by the most Hawaii State women (48 or 81.36 percent).

Although the same number of Pearl Harbor women used the coping strategies of talking with men and women apprentices informally, they did not rate the helpfulness of each of these equally. Talking with women apprentices informally was rated as helpful by 97.78 percent of the Pearl Harbor apprentices who used this strategy. Only 90.91 percent gave a similar rating to talking with men apprentices informally.

Table 8. Comparison of Positive and Negative Influences Experienced by the Greatest Percentage of Women While Participating in Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor Naval Shipyard		Hawaii State Apprenticeship Division	
	Response	Percent	Response	Percent
Person Providing Encouragement*	EEO Officer	100.00	Brother	100.00
	Female Apprentices	100.00	Children	100.00
	Female Friend	100.00	Sister	100.00
	Sister	100.00		
Person Providing Discouragement*	Supervisor	22.22	Husband	40.00
Greatest Obstacle Encountered*	Lack of Familiarity with Tools	79.31	Teasing and/or Harassment on the Job	71.93
Coping Assistance Most Frequently Experienced	Talking with Women Apprentices Informally	91.38	Talking with Men Apprentices Informally	81.36
	Talking with Men Apprentices Informally	91.38		
Coping Assistance Least Experienced	Formal, Organized Meeting with Both Men and Women Apprentices	53.45	Interaction with EEO Specialist/Counselor	67.80
Coping Assistance Experienced and Considered Helpful	Talking with Women Apprentices Informally	97.78	Formal, Organized Meeting with Both Men and Women Apprentices	100.00

Table 8 (continued) Comparison of Positive and Negative Influences Experienced by the Greatest Percentage of Women While Participating in Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor Naval Shipyard		Hawaii State Apprenticeship Division	
	Response	Percent	Response	Percent
Coping Assistance Experienced and Considered Not Helpful	Individual Counseling or Discussion with Supervisor	22.22	Individual Counseling or Discussion with Supervisor	20.69
High School Course Taken and Considered Very Helpful (Only courses with 5 or more survey respondents were considered)	Trigonometry	83.33	General/Basic Mathematics	64.86
Postsecondary Course Taken and Considered Very Helpful (only courses rated by 5 or more respondents were considered)	Algebra	100.00	Algebra	81.82
Prior Occupational Experience Considered Very Helpful	Crafts	80.00	Crafts	66.67
Prior Occupational Experience Considered Not Helpful	Sales	100.00	Sales	75.00

*Statistically significant differences were found for one or more items within this category of questions.

While more Hawaii State women used the coping strategy of talking with men apprentices informally, three or 8.33 percent felt this strategy was not helpful. Formal, organized meetings with both men and women apprentices was rated as helpful by 100 percent of the Hawaii State women who had availed themselves of this coping strategy.

Of the high school courses which had been completed by five or more respondents, trigonometry was rated by the greatest percentage (83.33) of Pearl Harbor women as helpful in doing the work in apprenticeship. General or basic mathematics was rated helpful by the greatest percentage (64.86) of the Hawaii State respondents who had completed this course.

As with the first two major research questions, statistically significant differences need to be highlighted for this question. A summary of these differences is available in Table 9.

For the question concerning particular people or groups of people who encouraged the women while in apprenticeship, statistically significant differences were found for the individuals husband ($p < .0108$), female friends ($p < .0493$), supervisor ($p < .0257$), counselor/EEO officer ($p < .0100$), male apprentices ($p < .0069$), and female apprentices ($p < .0001$). For each of these individuals, the Pearl Harbor respondents reported more encouragement and less discouragement than the Hawaii State respondents.

With the exception of husband, all of these individuals are outside the family. In fact, excluding female friends, influence from people on the job accounts for the difference between the Pearl Harbor and Hawaii State groups. However, female friends might also be considered an on-the-job influence to the Pearl Harbor group because the women apprentices may have counted each other as friends.

While more Hawaii State women used the coping strategy of talking with men apprentices informally, three or 8.33 percent felt this strategy was not helpful. Formal, organized meetings with both men and women apprentices was rated as helpful by 100 percent of the Hawaii State women who had availed themselves of this coping strategy.

Of the high school courses which had been completed by five or more respondents, trigonometry was rated by the greatest percentage (83.33) of Pearl Harbor women as helpful in doing the work in apprenticeship. General or basic mathematics was rated helpful by the greatest percentage (64.86) of the Hawaii State respondents who had completed this course.

As with the first two major research questions, statistically significant differences need to be highlighted for this question. A summary of these differences is available in Table 9.

For the question concerning particular people or groups of people who encouraged the women while in apprenticeship, statistically significant differences were found for the individuals husband ($p < .0108$), female friends ($p < .0493$), supervisor ($p < .0257$), counselor/EEO officer ($p < .0100$), male apprentices ($p < .0069$), and female apprentices ($p < .0001$). For each of these individuals, the Pearl Harbor respondents reported more encouragement and less discouragement than the Hawaii State respondents.

With the exception of husband, all of these individuals are outside the family. In fact, excluding female friends, influence from people on the job accounts for the difference between the Pearl Harbor and Hawaii State groups. However, female friends might also be considered an on-the-job influence to the Pearl Harbor group because the women apprentices may have counted each other as friends.

Table 9. Influences Experienced While in Apprenticeship: Statistically Significant Differences Found for Women Participating in Two Established Apprenticeship Programs in Hawaii

	Overall Probability	Individual Items with Statistically Significant Differences	Reasons for Significant Differences
Person Encouraging or Discouraging	.0001	Husband $x^2 = 11.174$ $p < .0108$	Encouraged More PH Women Discouraged More HS Women
		Female Friend $x^2 = 7.845$ $p < .0493$	Encouraged More PH Women Discouraged More HS Women
		Supervisor $x^2 = 9.285$ $p < .0257$	Encouraged More PH Women Discouraged More HS Women
		Counselor/EEO Officer $x^2 = 11.351$ $p < .0100$	Encouraged More PH Women Discouraged More HS Women
		Male Apprentices $x^2 = 12.136$ $p < .0069$	Encouraged More PH Women Discouraged More HS Women
		Female Apprentices $x^2 = 32.514$ $p < .0001$	Encouraged More PH Women Discouraged More HS Women

Table 9 (continued) Influences Experienced While in Apprenticeship: Statistically Significant Differences Found for Women Participating in Two Established Apprenticeship Programs in Hawaii

	Overall Probability	Individual Items with Statistically Significant Differences	Reasons for Significant Difference
Obstacle or Problem	.5181	Difficulty with Understanding Classroom/ Instruction/Assignments $x^2 = 7.976$ $p < .0185$	Encountered by More PH Women
		Lack of Familiarity with Tools $x^2 = 11.426$ $p < .0033$	Encountered by More PH Women
		Lack of Physical Strength $x^2 = 7.736$ $p < .0209$	Encountered by More PH Women
		Obtaining Job Placements $x^2 = 7.267$ $p < .0264$	Encountered by More PH Women
Coping Assistance Experienced and Considered Helpful	.0020	Talking with Women Apprentices Informally $x^2 = 14.180$ $p < .0027$	Experienced and Considered Helpful by More PH Women

Statistically significant differences were also found for the responses to the question concerning obstacles or hardships encountered while in apprenticeship. For the obstacles, difficulty with understanding classroom instruction/assignments, only 15 or 26.32 percent of the Hawaii State respondents claimed that this was a problem. Since 30 or 51.72 percent of the Pearl Harbor women reported understanding classroom instruction/assignments as an obstacle, there was a statistically significant difference at the $p < .0185$ level.

More than twice as many Hawaii State than Pearl Harbor women reported no problem with tools. Thus, there was a significant difference between the two groups ($p < .0033$). Similarly, nearly twice as many Hawaii State than Pearl Harbor women reported no problem with physical strength resulting in a statistically significant difference ($p < .0209$).

Obtaining job placements was the fourth obstacle for which there was a statistically significant difference between the two groups. This difference at the $p < .0264$ level was the only obstacle which more Hawaii State than Pearl Harbor women reported as a problem.

When asked which coping strategies were helpful in dealing with obstacles or problems encountered in apprenticeship, there was a statistically significant difference in the responses provided by the two groups ($x^2 = 14.842$, $df = 3$, $p < .0020$). This difference is probably due to the fact that Pearl Harbor respondents gave 141 helpful ratings to various coping strategies as opposed to 115 from the Hawaii State women.

Within this category, a statistically significant difference was found between the two groups for their rating of the helpfulness of talking with female apprentices informally. This difference at the $p < .0027$ level resulted from the finding that 21 Hawaii State women as

opposed to 5 Pearl Harbor women did not experience such help. Since this assistance was experienced by the most Pearl Harbor respondents (53 or 91.38 percent) and also rated helpful by 44 of 45 Pearl Harbor respondents, the importance of interaction with other female apprentices is again underscored.

Research Question 4

Will the demographic characteristics, background experiences, and deterrents and positive influences experienced when entering and participating in apprenticeship be the same for those women who completed the program whether they registered with Pearl Harbor Naval Shipyard or Hawaii State Apprenticeship Division?

As shown in Table 10, the number of women responding to the survey questionnaire used in this study who had completed apprenticeship totaled only 20 or 16.95 percent of all of the respondents. Of these 20, 14 were from Pearl Harbor and 6 were from Hawaii State. Thus, of all Pearl Harbor respondents, 24.14 percent were completers and of all Hawaii State respondents, 10 percent were completers. There were too few respondents from the Hawaii State group to make a valid comparison of the characteristics of the completers in the two groups.

However, there was a statistically significant difference at the $p < .0001$ level where $x^2 = 23.864$ and $df = 2$ concerning the composition of terminations, completions, and currently in program status of the respondents in the two groups. The Pearl Harbor group was composed of 70 percent of all of the completers. Concomitantly, only 30 percent of the completers were in the Hawaii State group.

Women who entered the Pearl Harbor apprenticeship program were more likely to become completers than were women who entered the Hawaii State apprenticeship program.

Table 10

Composition of Completions, In-Program Status, and Terminations of Respondents in Two Established Apprenticeship Programs in Hawaii

	Pearl Harbor		Hawaii State		Total	
	No.	Percent	No.	Percent	No.	Percent
Completed Program	14	24.14	6	10.00	20	16.95
Currently in Program	41	70.69	28	46.67	69	58.47
Terminated from Program	3	5.17	26	43.33	29	24.58
Total	58	100.00	60	100.00	118	100.00

$x^2 = 23.864$, $df = 2$, $p < .0001$

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Information obtained at the outset of this study inferred that women who entered an apprenticeship program registered with Pearl Harbor Naval Shipyard were more likely to complete the program and become journeyworkers than were women who entered an apprenticeship program registered with the State of Hawaii Division of Apprenticeship. The respondents to the survey questionnaire used in this study affirmed this finding.

A comparison of the number of completers and terminators in the two groups revealed a statistically significant difference at the $p < .0001$ level where $x^2 = 23.864$ and $df = 2$. The Pearl Harbor group was composed of 70 percent of the total completers and 10.34 percent of the total terminators. Concomitantly, the Hawaii State group was composed of 30 percent of the total completers and 89.66 percent of the total terminators.

To what can the difference in completion of apprenticeship program rates be attributed? Three general areas of influence were researched in this study to determine the differences between the two groups of women registered with Pearl Harbor Naval Shipyard or the Apprenticeship Division of the Hawaii Department of Labor and Industrial Relations.

The first area of research concerned the demographic characteristics and background experiences of the women in the two programs. Both groups appeared to be similar in most respects. That

is, they were about the same age, had the same number of children, attended high schools located in Hawaii where they enrolled in nearly the same courses, participated in sports as a hobby, and were working between the time they graduated from school and entered apprenticeship. Those with postsecondary education experience attended institutions located in Hawaii.

It was within the differences between the two groups that an important characteristic appeared. The Pearl Harbor respondents exhibited more conventionalism than the Hawaii State respondents. That is, the Pearl Harbor respondents, through certainly not lacking a pioneer spirit as evidenced by their decision to enter a traditionally male-dominated apprenticeship program, seemed more steadfast in their endeavors and more prone to follow stereotyped patterns of conduct.

For example, the Pearl Harbor women were more likely to be married while the Hawaii State women were more likely to be divorced, separated, or single. Although the women attended the same schools and took, generally, the same courses, the Pearl Harbor women were more likely to take the more advanced subject in a succession of courses. For instance, in the area of mathematics, more Pearl Harbor women completed more courses and more advanced courses such as plane geometry. After high school, more Pearl Harbor women went on to a postsecondary institution where they earned more certificates and degrees than their Hawaii State counterparts. Although both groups of women reported work experience prior to entering appreaticeship, the Pearl Harbor women consistently took jobs in the clerical field. Even when the Pearl Harbor women switched jobs, they tended to take another

position in a clerical occupation. For the Hawaii State women, a pattern of prior work experience by occupational category was not identifiable.

The Pearl Harbor respondents do not appear to be risk takers; they seem to be purposeful and persistent. While the Hawaii State respondents do not appear to be rebellious, they are not afraid of change. Since the two groups were statistically significantly different in their ethnicity, perhaps further study of this factor could provide insight and understanding of cultural differences.

The second area of research in this study concerned the deterrents and positive influences the women had experienced when entering apprenticeship. A wide range of questions was included in this area to determine not only how these women discovered the option of apprenticeship but also what people or experiences encouraged or discouraged them in their decision to enter the program.

A comparison of the helpfulness of certain background experiences such as prior work or school experience showed similarities between the two groups. It was in other areas of influence where the differences appeared.

For the three questions asking the women how they became aware of apprenticeship, in what mode they received information, and what was the most encouraging influence, the Pearl Harbor women cited female and male friends or talking with female apprentices as their principal and most positive influences. For these same three questions, the Hawaii State respondents reported that female friends provided them information but that their most frequently used mode of obtaining information was through visiting potential job sites. As for the most

encouraging sources of information, the Hawaii State women identified visiting potential job sites and talking with male apprentices. Thus, of the four responses provided by the Hawaii State women, only two were people or interaction oriented.

Importantly, the sources of information and encouragement experienced by the Pearl Harbor respondents remained available once they entered apprenticeship and, in fact, may have promoted the development of a network of support and assistance. The Hawaii State women, on the other hand, would probably not find visiting potential job sites useful once in apprenticeship. While male apprentices could continue to encourage them and provide the basis for a support network, the Hawaii State women claimed that male co-workers harassed them when they were on the job.

The Hawaii State women lost their initial information and support network because it did not involve people who might have continued to be their ally once they were in apprenticeship. While the original network of information and encouragement suppliers for the Pearl Harbor women may have continued to grow on the job, the Hawaii State women became more isolated.

The Pearl Harbor women were gently nudged into apprenticeship while the Hawaii State women entered totally of their own volition. The Pearl Harbor women seemed to have had the advantage of a support group of other women apprentices who could tell them honestly what to expect while encouraging them to ent[illegible]he program. No such support group was apparent for the Hawaii St[illegible] women.

The third major research ques[illegible]on in this study concerned the deterrents and positive influences [illegible]xperienced by the women while participating in apprenticeship. A wide range of questions was asked

to determine not only the helpfulness of various background experiences but also to determine the impact of certain influences encountered while in apprenticeship.

Except for the question concerning the most helpful high school course, the two groups were again in agreement as to what background experiences were the most and least helpful to them once in apprenticeship. For the most helpful high school course, both groups selected a subject in mathematics. The Pearl Harbor group chose trigonometry while the Hawaii State group chose general/basic mathematics. Perhaps this indicates a difference in the difficulty of related instruction provided to the two groups while in apprenticeship.

Both groups agreed that the least helpful assistance in solving problems on the job came from individual counseling or discussion with a supervisor. No further similarities existed in this third major research question.

The first difference identified in this third area of research concerned the perception of the respondents as to who provided encouragement or discouragement while they were in apprenticeship. Of the four people that the most Pearl Harbor women thought were encouraging, only one individual, sister, was a family member. Two were people from the work environment--EEO officer and female apprentices. The fourth, female friend, may also have been from the work setting if other females on the job site (including female apprentices and journeyworkers) were considered friends. On the other hand, the three people who the Hawaii State women thought were most encouraging were all family members--brother, children, and sister.

Pearl Harbor women apprentices received encouragement both on the job and from friends plus a family member while Hawaii State women received encouragement mostly from certain family members. At the same time, the person reported as discouraging by the most Hawaii State women was husband. Home life for the Hawaii State women seems to be confusing because they reported that their husbands discouraged them while their children and other family members encouraged them.

Another difference between the two groups was their identification of the obstacles with which they were faced on the job. Most Pearl Harbor women felt lack of familiarity with tools was their greatest obstacle. While this is certainly not a small or insignificant problem, it is something which will probably be overcome with experience on the job. The obstacle reported by the most Hawaii State women, however, was of a different nature. For them, teasing and/or harassment on the job was cited the most often as an obstacle. This is not a problem over which the women have direct control. Coupled with the lack of a support group on the job, the problem is formidable.

In fact, assuming that it was men on the job who were harassing them, the Hawaii State women apprentices were in a predicament. It appears that the only people on the job who they could go to for support were the very ones who were harassing them. But they did indeed go to men apprentices for help because talking with men apprentices informally was the coping assistance used by the most Hawaii State women.

Although talking with men apprentices informally was also used as a coping strategy by the Pearl Harbor women, an equal number also

reported talking with women apprentices informally. Thus, two different on-the-job sources of interaction and assistance were being used by a large percentage of Pearl Harbor women.

Probably the reason most Hawaii State women checked formal, organized meetings with both men and women apprentices as a helpful coping strategy was that this was a time when they were able to communicate without fear of harassment. Presumably these formal, organized meetings were union gatherings. This same strategy was rated as the least used coping assistance by the Pearl Harbor women. It is suspected that the Pearl Harbor women did not have to wait for such a formal meeting; they could bring their problems to other female apprentices who most of them rated as providing the most helpful coping assistance.

The greatest percentage of Hawaii State respondents checked interaction with EEO Specialist/Counselor as the coping assistance least used. Since the Pearl Harbor women reported encouragement from an EEO Specialist/Counselor, it again appears that they had another avenue of support which the Hawaii State women did not have.

The differences found between the two groups of women apprentices in the first two major research questions were highlighted in this third question. The Pearl Harbor women entered apprenticeship with their support groups intact. These women were encouraged not only to enter apprenticeship but to complete the program. The Hawaii State women apprentices did not receive such support. They entered the program without much support from those already in apprenticeship; they had little or no contact with other women apprentices while in apprenticeship; and they received little or no encouragement from

others on the job site. Even though these women expressed a sense of individualism and willingness to try new things, the total independent nature which seems to be necessary for them to succeed in apprenticeship was far too difficult a requirement. These women must be supported in their endeavor to complete apprenticeship.

There are two questions which must be asked in light of these conclusions: Would the women who completed the Pearl Harbor Naval Shipyard apprenticeship program complete an apprenticeship program registered with the Division of Apprenticeship, Hawaii Department of Labor and Industrial Relations? Conversely, would the women who dropped out of or terminated from an apprenticeship program registered with the Hawaii Division of Apprenticeship be successful in the Pearl Harbor Naval Shipyard program?

Recommendations

The findings delineated in this study indicate that action must be taken to improve the opportunities of women in apprenticeship programs in Hawaii. Recommendations are made for not only the two apprenticeship programs studied but also for the secondary and postsecondary school systems which provide potential women apprentices the skills and experience for on-the-job use as well as ideas on the roles of females and males in our society.

Recommendations to Secondary and Postsecondary School Systems

1. Through career education and counseling, beginning in the elementary schools, females should be encouraged to learn about the full range of apprenticeable occupations available. Only 3 of the 118

respondents in this study had learned of apprenticeship through school personnel.

2. Efforts should be made to infuse knowledge of tools into existing vocational and/or career education courses. Women must not only be exposed to a variety of tools but be taught how to use them.

3. Counselors and other school personnel from the secondary and postsecondary levels need to meet on a regular basis with staff from the state and federal apprenticeship programs to build a working relationship which promotes a better understanding of entry requirements and to develop awareness and promotional activities.

4. Provisions must be made to encourage women to explore apprenticeship opportunities. School personnel who wait for female students to first indicate an interest in a non-traditional occupation before providing assistance are depriving those who are shy or uncertain of their options of the encouragement and advice they need.

5. Programs must be available to educate school personnel as to the nature of the skills required for a variety of trades. Summer work experience in apprenticeship job sites would be invaluable for teachers and counselors.

6. School personnel must make an effort to establish closer ties with companies and unions in order to provide complete and accurate information about apprenticeship opportunities to students.

7. The recommendations of the women in response to an open-ended question asking what the schools should do to encourage more women to enter apprenticeship should be studied. Responses to this question are located in Appendix C. The recommendations of the respondents are grouped by apprenticeship program and by the status of the women in

the program. That is, there are sets of responses from terminators, completers, and women currently in apprenticeship.

8. School personnel should examine the secondary- and postsecondary-level courses recommended by the respondents in this study as helpful in gaining entrance and doing the work in apprenticeship. Counseling and program offerings should be revised as necessary to include these recommendations.

Recommendations to the Division of Apprenticeship, Hawaii Department of Labor and Industrial Relations

1. Supervisors should be provided in-service training so that they can help eliminate sexual harassment and keep work sites free of discriminatory practices.

2. An effective complaint procedure should be established and disseminated frequently to all apprentices, journeyworkers, and supervisors.

3. If possible, more than one woman should be assigned to each work site.

4. A recruitment and support program should be established so that women can (a) obtain knowledge of the work and working conditions and (b) be assured of a support system within the organization. The Pearl Harbor Naval Shipyard Federal Women's Program, including the employment of a full-time manager, should be adopted by the Division of Apprenticeship.

5. Working relationships with school personnel should be strengthened so that curricula can be revised to be more relevant to students desiring a career in apprenticeable occupations.

6. All legal powers must be utilized to assure that companies are monitored for compliance not only with requirements for the hiring of women but also for the elimination of discriminatory practices on the work site.

7. The recommendations of the women to two open-ended questions should be studied for program improvement ideas. These two questions were: What should employers do to encourage women to enter apprenticeship? and What should be done to assure that more women complete apprenticeship? These responses are located in Appendix C. The recommendations of the respondents are grouped both by the status of the women in the program and by the particular program they had entered.

Recommendations to Pearl Harbor Naval Shipyard

1. Funding should be continued for the Federal Women's Program and additional financial support provided as needed to assist in the recruitment and retention of females in blue-collar occupations.

2. Candid information about entry requirements into apprenticeship must be given to school personnel and students. If most of the women in apprenticeship are being recruited from within Pearl Harbor Naval Shipyard, women should be advised as to how to obtain that first job and then how to proceed from that job into apprenticeship.

3. Efforts to make women aware of the counseling available through the Federal Women's Program should be continued. Although many of the respondents in this study were aware of the EEO Officer/Counselor and commented favorably on the encouragement

provided, some of the women did not seem to know that such a support service was available.

4. Working relationships with school personnel should be strengthened so that curricula can be revised to be more relevant to students desiring a career in apprenticeable occupations.

5. Supervisors should be provided in-service training so that they can help eliminate sexual harassment and keep work sites free of discriminatory practices.

6. The recommendations of the women to two open-ended questions should be studied for program recruitment and retention ideas. These two questions were: What should employers do to encourage women to enter apprenticeship? and What should be done to assure that more women complete apprenticeship? These responses are located in Appendix C. The recommendations are categorized by the status of the women in the apprenticeship program. That is, responses are grouped as being from completers and terminators as well as those currently in the program.

APPENDIX A

SURVEY INSTRUMENT

INSTRUCTIONS: PLEASE ANSWER ALL OF THE QUESTIONS IN PART I WHETHER OR NOT YOU COMPLETED YOUR APPRENTICESHIP PROGRAM. ANSWER ALL OF THE QUESTIONS IN PART II ONLY IF YOU ATTENDED ANOTHER SCHOOL OR COLLEGE AFTER HIGH SCHOOL. THANK YOU.

PART I:

1. Present status in apprenticeship program:
   - ☐ Completed apprenticeship program.
   - ☐ Presently in apprenticeship.
   - ☐ Left without completing apprenticeship program.

   Reasons for leaving: _____

   _____

2. Marital status: ☐ divorced ☐ separated ☐ single ☐ married ☐ widowed

3. Your age: ____ 4. If you have children, how many? ____

5. Ethnicity (Check one):

☐ Black	☐ Filipino	☐ Korean
☐ Caucasian, Portuguese	☐ Hawaiian	☐ Mixed (Non-Hawaiian)
☐ Caucasian, Not Portuguese	☐ Part-Hawaiian	☐ Okinawan
☐ Chinese	☐ Japanese	☐ Samoan
	☐ Other (please specify): _____	

6. Please list previous work experience starting with the job held prior to entering apprenticeship and rate the helpfulness of the work experience in (1) getting into apprenticeship and (2) doing the work in the apprenticeship program.

		(1) In gaining admission to apprenticeship, which work experiences were:			(2) Once in apprenticeship, which work experiences were:		
Occupation/Job Title	Number of Months Employed	Very Helpful	Moderately Helpful	Not Helpful	Very Helpful	Moderately Helpful	Not Helpful
_____	____	☐	☐	☐	☐	☐	☐
_____	____	☐	☐	☐	☐	☐	☐
_____	____	☐	☐	☐	☐	☐	☐

7. Last high school attended: _____ Location: _____ (City) _____ (State)

8. List the number of semesters of the following high school courses you completed and rate the helpfulness of the course in (1) getting into apprenticeship and (2) doing the work in the apprenticeship program.

High School Courses	Number of Semesters Completed	(1) In gaining admission to apprenticeship, which courses were: Very Helpful	Moderately Helpful	Not Helpful	(2) Once in apprenticeship, which courses were: Very Helpful	Moderately Helpful	Not Helpful
Science							
Biology	___	☐	☐	☐	☐	☐	☐
Chemistry	___	☐	☐	☐	☐	☐	☐
Physics	___	☐	☐	☐	☐	☐	☐
Other (specify) _____	___	☐	☐	☐	☐	☐	☐
Mathematics							
General or Basic	___	☐	☐	☐	☐	☐	☐
Algebra	___	☐	☐	☐	☐	☐	☐
Plane Geometry	___	☐	☐	☐	☐	☐	☐
Analytical Geometry	___	☐	☐	☐	☐	☐	☐
Trigonometry	___	☐	☐	☐	☐	☐	☐
Calculus	___	☐	☐	☐	☐	☐	☐
Other (specify) _____	___	☐	☐	☐	☐	☐	☐
Vocational							
Auto Body Repair	___	☐	☐	☐	☐	☐	☐
Auto Mechanics	___	☐	☐	☐	☐	☐	☐
Carpentry	___	☐	☐	☐	☐	☐	☐
Drafting	___	☐	☐	☐	☐	☐	☐
Electronics	___	☐	☐	☐	☐	☐	☐
Welding	___	☐	☐	☐	☐	☐	☐
Other (specify) _____	___	☐	☐	☐	☐	☐	☐

9. What high school courses and/or extracurricular activities would you recommend to a person planning to enroll in apprenticeship? _____

_____

10. How did you become aware of the apprenticeship program? (Check all that apply)

☐ Mother	☐ Sister(s)	☐ Teacher(s)	☐ Newspaper
☐ Father	☐ Male friend(s)	☐ School counselor(s)	☐ Other, please specify
☐ Husband	☐ Female friend(s)	☐ Career Fair	_____
☐ Brother(s)	☐ EEO Specialist	☐ Workshop	_____

11. Rate the influence of each of the following in your decision to enter apprenticeship.

	Very Important	Somewhat Important	Not Important
Ability/aptitude in skills required	☐	☐	☐
Desire to try something different	☐	☐	☐
Interest in occupation	☐	☐	☐
Job satisfaction	☐	☐	☐
Money	☐	☐	☐
Opportunity for advancement	☐	☐	☐
Other (specify)_____	☐	☐	☐

12. What hobbies or leisure-time activities do you have which helped you in apprenticeship?

_____

13. Check one response for each person or group of persons listed below which best describes their influence on your decision to become an apprentice.

	Encouraged	Neutral	Discouraged	No Contact		Encouraged	Neutral	Discouraged	No Contact
Mother	☐	☐	☐	☐	Male teacher	☐	☐	☐	☐
Father	☐	☐	☐	☐	Female teacher	☐	☐	☐	☐
Husband	☐	☐	☐	☐	Male counselor(s)	☐	☐	☐	☐
Brother	☐	☐	☐	☐	Female counselor(s)	☐	☐	☐	☐
Sister(s)	☐	☐	☐	☐	Male apprentices	☐	☐	☐	☐
Male friend(s)	☐	☐	☐	☐	Female apprentices	☐	☐	☐	☐
Female friend(s)	☐	☐	☐	☐	Other (specify)	☐	☐	☐	☐
					_____				

14. Rate the influence of each of the following in your decision to become an apprentice.

	Encouraged	Neutral	Discouraged	Did Not Experience
Career orientation program	☐	☐	☐	☐
Individual counseling or discussion	☐	☐	☐	☐
Printed material (brochures, newspaper)	☐	☐	☐	☐
Talking with male apprentices	☐	☐	☐	☐
Talking with female apprentices	☐	☐	☐	☐
Visiting potential job sites	☐	☐	☐	☐
Other (please specify)_____	☐	☐	☐	☐

_____

15. What should school personnel do to encourage women to enter apprenticeship?_____

_____

_____

16. What should employers do to encourage women to enter apprenticeship?_____

_____

_____

17. Check one response for each person or group of persons below which best describes their influence while you were in apprenticeship.

	Encouraged	Neutral	Discouraged	No Contact		Encouraged	Neutral	Discouraged	No Contact
Mother	☐	☐	☐	☐	Instructor(s)	☐	☐	☐	☐
Father	☐	☐	☐	☐	Supervisor(s)	☐	☐	☐	☐
Husband	☐	☐	☐	☐	Employer counselor/ EEO officer	☐	☐	☐	☐
Children	☐	☐	☐	☐	Male apprentices	☐	☐	☐	☐
Brother(s)	☐	☐	☐	☐	Female apprentices	☐	☐	☐	☐
Sister(s)	☐	☐	☐	☐	Other (please specify)	☐	☐	☐	☐
Male friend(s)	☐	☐	☐	☐					
Female friend(s)	☐	☐	☐	☐	_____				

18. Have you experienced any of the following problems while in apprenticeship?

	Yes	Somewhat	No
Scheduling time to attend related instruction classes	☐	☐	☐
Difficulty with understanding classroom instruction/assignments	☐	☐	☐
Difficulty adjusting to working predominantly with men	☐	☐	☐
Lack of familiarity with tools	☐	☐	☐
Lack of physical strength	☐	☐	☐
Obtaining job placements	☐	☐	☐
Teasing and/or harassment on the job	☐	☐	☐
Male apprentices having difficulty working with female apprentices	☐	☐	☐
Teacher(s) having difficulty working with female apprentices	☐	☐	☐
Supervisor(s) having difficulty working with female apprentices	☐	☐	☐
Other (please specify)_____	☐	☐	☐

19. Rate the helpfulness of the following in coping with problems in apprenticeship.

	Helpful	Neutral	Not Helpful	Did Not Experience
Availability of Equal Employment Opportunity Specialist/Counselor	☐	☐	☐	☐
Individual counseling or discussion with supervisor	☐	☐	☐	☐
Talking with women apprentices informally	☐	☐	☐	☐
Talking with men apprentices informally	☐	☐	☐	☐
Formal, organized meetings with both men and women apprentices	☐	☐	☐	☐
Other (please specify)_____	☐	☐	☐	☐

_____

20. What should be done to assure that more women complete apprenticeship?_____

_____

_____

IF YOU ATTENDED ANOTHER SCHOOL AFTER HIGH SCHOOL AND PRIOR TO ENTERING APPRENTICESHIP, PLEASE ANSWER QUESTIONS 21 THROUGH 25 IN PART II. THANK YOU.

PART II: ANSWER THIS SECTION ONLY IF YOU ATTENDED ANOTHER SCHOOL AFTER HIGH SCHOOL.

21. School or college you attended: _____ Location: _____
City State

22. Semester or quarter hours completed: ____semester hours or ____quarter hours.

23. If you received a degree or certificate of completion, please answer the following:

Degree	Certificate	Major	Year Received

24. List the number of semesters of the following courses you completed after high school and rate the helpfulness of the course in (1) getting into apprenticeship and (2) doing the work in the apprenticeship program.

Courses Taken After High School	Number of Semesters Completed	(1) In gaining admission to apprenticeship, which courses were: Very Helpful	Moderately Helpful	Not Helpful	(2) Once in apprenticeship, which courses were: Very Helpful	Moderately Helpful	Not Helpful
Science							
Biology	___	☐	☐	☐	☐	☐	☐
Chemistry	___	☐	☐	☐	☐	☐	☐
Physics	___	☐	☐	☐	☐	☐	☐
Other (specify) _____	___	☐	☐	☐	☐	☐	☐
Mathematics							
General or Basic	___	☐	☐	☐	☐	☐	☐
Algebra	___	☐	☐	☐	☐	☐	☐
Plane Geometry	___	☐	☐	☐	☐	☐	☐
Analytical Geometry	___	☐	☐	☐	☐	☐	☐
Trigonometry	___	☐	☐	☐	☐	☐	☐
Calculus	___	☐	☐	☐	☐	☐	☐
Other (specify) _____	___	☐	☐	☐	☐	☐	☐
Vocational							
Auto Body Repair	___	☐	☐	☐	☐	☐	☐
Auto Mechanics	___	☐	☐	☐	☐	☐	☐
Carpentry	___	☐	☐	☐	☐	☐	☐
Drafting	___	☐	☐	☐	☐	☐	☐
Electronics	___	☐	☐	☐	☐	☐	☐
Welding	___	☐	☐	☐	☐	☐	☐
Other (specify) _____	___	☐	☐	☐	☐	☐	☐

25. What postsecondary (after high school) courses and/or extracurricular activities would you recommend to a person who plans to enroll in apprenticeship?_____

_____

PLEASE MAIL YOUR COMPLETED QUESTIONNAIRE IMMEDIATELY. IF YOU WOULD LIKE TO KNOW THE RESULTS OF THIS SURVEY, PLEASE CALL OR WRITE BARBARA WHITE AT 948-7461 OR 2327 DOLE STREET, HONOLULU, HI 96822.

THANK YOU FOR YOUR ASSISTANCE

APPENDIX B

LETTER ATTACHED TO SURVEY INSTRUMENT

UNIVERSITY OF HAWAII

Office of the State Director for Vocational Education

November 24, 1982

To Current and Former Women Apprentices:

Your help is urgently needed.

The attached questionnaire is being sent to all women who entered apprenticeship during July, 1974 through June, 1982. The purpose of the questionnaire is to obtain information about the factors influencing the participation of women in apprenticeship programs in Hawaii.

It is essential that all of you respond whether or not you completed your program. The information you provide will contribute to a better understanding of the experiences of women in apprenticeship. This then can lead to greater apprenticeship opportunities for women.

This survey will take approximately 15 minutes of your time. Please answer all of the questions and return this form by December 10, 1982 in the enclosed stamped, addressed envelope. Your responses will remain confidential, and the questionnaire will be destroyed after the data are transferred to computer cards.

This study is being conducted under the auspices of the Office of the State Director for Vocational Education and the College of Education at the University of Hawaii with the cooperation of Pearl Harbor Naval Shipyard and the Apprenticeship Division of the Hawaii Department of Labor and Industrial Relations.

Thank you for this important contribution.

Sincerely,

Barbara White

Barbara White
Principal Investigator

We urge your participation in this study:

Gladys Ho

Gladys Ho
Pearl Harbor Naval Shipyard

Cynthia Pierson

Cynthia Pierson
Pearl Harbor Naval Shipyard

Toshio Hagiwara

Toshio Hagiwara
Apprenticeship Division
Hawaii Dept. of Labor and
Industrial Relations

Nelson H. Muraoka

Nelson Muraoka
Hawaii State Board for
Vocational Education

2327 Dole Street · Honolulu, Hawaii 96822 / Cable Address: UHMAIL
An Equal Opportunity Employer

BEST COPY AVAILABLE

APPENDIX C

RESPONSES TO OPEN-ENDED QUESTIONS AND ADDITIONAL REMARKS PROVIDED BY RESPONDENTS

C.1. Survey Question 1: Reason for Leaving Apprenticeship

Pearl Harbor

1. Domestic peace.
2. Moving to mainland.
3. Classroom work was too accelerated. No individual help, instruction, or tutoring was offered. I liked my trade.

Hawaii State

1. Got a job with the U.S. Post Office.
2. Contact Mason's Union.
3. Too dangerous. Many times companies disregarded OSHA regs in order to speed job.
4. I had no interest in the type of work I was doing--mechanics.
5. Not much future in the program. They don't always give you a chance to experience all phases of the program. Just stuck making forms.
6. Classes were good but on the job seemed like the men didn't like women working with them.
7. Was ill.
8. Decided to stay home to take care of my new daughter.
9. Family illness.
10. I was tired of hassling with the chef and I had an opportunity to go into management.

C.1. Survey Question 1 (continued)

Hawaii State (continued)

11. Language barriers.
12. Personal reasons.
13. Hurt my back--because of what I feel was harassment.
14. Found full-time job elsewhere.
15. Got full-time job.
16. Completing the program was not worth the hassles and insults from men.
17. I felt inadequate.
18. No job openings.
19. Age.
20. Pressure of going to work and school.

C.2. Survey Question 10. Sources of Apprenticeship Program Information

Pearl Harbor	Hawaii State
Completed	
	1. By Accident
	2. Support Service for Highway Construction
In-Program	
	1. WIN counselor
	2. Notice posted on bulletin board at old job
Terminated	
	1. Myself
	2. Harriet Directory Board
	3. Daughter
	4. Brother-in-law

C.3. Survey Question 11. Benefits and Personal Attributes as an Influence to Enter Apprenticeship

Completers

Pearl Harbor	Hawaii State
1. I truly believe it's your attitude rather than any skill or activities that help you.	1. I thought if I could drive a school bus, I could do anything.
2. On-the-job training	2. Enjoyment
	3. Determination

In-Program

Pearl Harbor	Hawaii State
1. Job security at PHNS	1. Personal Satisfaction
2. Love to work with men	2. Being trained for a trade
3. Job security	3. Learn to build homes
4. Future employment available	4. Desire to do something difficult
5. Attractive benefits	
6. Wanted to be able to support myself and children.	

Terminators

Pearl Harbor	Hawaii State
1. I got such a high score on the entrance exam--felt sure I could do the program	1. Attempted to do a male's job
	2. Survival of my family (very important)
	3. Desire to learn (very important)
	4. Wanted to learn carpentry skills (very important)
	5. Learn a trade

C.4. Survey Question 12: Hobbies or Leisure Time Activities

Completers

Pearl Harbor	Hawaii State
1. Work with hands on intricate things	1. Art, musical instruments, singing
2. Home repair, home painting, tennis	2. Vegetable carving, making canapes
3. Sewing, baking, needlework	3. Liked to watch machine operators in the cane field at harvest time
4. Work on car repairs, do-it-yourself projects	
5. Sewing	
6. Model and furniture building, refinishing, pattern making & sewing, painting	
7. Sewing	

In-Program

1. Tampered with auto tune-up	1. Being outgoing and trying lots of activities--skiing, racquetball, etc.
2. All sports are helpful--keeping in shape is important because you need stamina	2. Fishing, power lifting
3. Jewelry designing	3. Working with my hands
4. Home improvements, appliance & auto repair	4. Helped a furniture/cabinet maker
5. Den mother--working with tools for special projects	5. Body building--need on job
6. Body surfing, tennis	6. Interest in interior decorating
7. Helping fix things at home	7. Making power devices
8. Jogging, weight training	8. Aikido and piloting airplanes
9. Sewing, cooking--lots of hand-eye coordination	

C.4. Survey Question 12 (continued)

Pearl Harbor	Hawaii State
In-Program (continued)	
10. Volleyball, softball--officer of apprentice (socializing)	9. Creating things with my hands--crafts and building
11. Sewing, pattern design	10. Sewing, wood projects and furniture making
12. Being in family with no son--I do repairs	11. Architectural study, group dynamics study, weaving, furniture making, hiking
13. Drinking and sports--why? The guys talk during and after each. You learn mistakes and gain acceptance.	12. Looking at construction job sites
14. Reading, sports	13. Sewing
15. Physical activities (exercise and sports)	14. Reading, home projects
16. Sports, Army National Guard	15. Working on cars, exercising
17. Carpentry work, helping my husband repair our cars	
18. Home repairs and remodeling	
19. Sewing, working with hands, outdoor physical activities	
20. Running (improved physical fitness)	
21. Crafts	
22. Sewing	
Terminators	
1. Fixing automobiles	1. Working with father/mother on building projects
2. Doing home repairs, using tools	2. Like to work with my hands
	3. Hiking
	4. Working with hands

C.4. Survey Question 12 (continued)

Pearl Harbor	Hawaii State
	5. Woodworking, home maintenance
	6. Cake decorating, food preparation
	7. Woodwork
	8. Running and reading
	9. Weight lifting
	10. Carpentry

C.5. Survey Question 13: Persons Who Influenced Decision to Enter Apprenticeship

Pearl Harbor	Hawaii State
Completers	
1. Uncles (encouraged)	1. Husband (Respondent circled and starred)
In-Program	
1. Shop supervisors (encouraged)	1. Grandparents (encouraged)
2. Boss (encouraged)	2. Children (encouraged)
3. Myself (encouraged)	3. Supervisor on voc. ed. job (encouraged)
4. Supervisors (encouraged)	4. State employment service counselor (encouraged)
	5. Children (encouraged)
Terminators	
1. EEP people/flyer (encouraged)	1. Son (encouraged)
	2. Apprenticeship coordinators (encouraged)
	3. Sous chef (discouraged)
	4. Employment office (encouraged)

C.6. Survey Question 15: Suggestions to School Personnel to Encourage Women to Enter Apprenticeship

Completers

Pearl Harbor

1. Career orientation with role models.
2. Provide statistics on how many have gone through the school and passed.
3. Job fairs, stress non-traditional for women.
4. Exposure to experience in fields through courses, projects.
5. I don't know that they can do much because school girls don't have much of a chance. But it seems to be very encouraging to hear from women who have been through it.
6. Expose them to vocational-type courses. Make them aware of what is available in apprenticeship programs.
7. Encourage via personal interviews, offering courses geared toward blue collar field, advertise career potential.
8. Have blue collar males and females talk to male and female students and their parents.
9. Make trade-related courses more appealing and more available to women.
10. Be extra supportive. Many women have the desire but are timid and unsure of the unknown; encourage them to talk to women who have done it--articulate, positive women who believe in what they do.

Hawaii State

1. Find out what they want to do. Have a list of opportunities in the job market.
2. Do not encourage them to enter unless they can show and try to do the work. They want equal rights and equal pay, but they don't try to do the work.
3. Encourage females to try new and different things.
4. Show slides of the women in action; take to work sites.
5. Learn more about the experiences women have to go through because the men still think it's their world.

C.6. Survey Question 15 (continued)

Pearl Harbor	Hawaii State

Completers (continued)

11. Make them aware of the opportunity.

12. Make them aware of the availability of these jobs--what skills/aptitudes are needed--what the trade does.

In-Program

1. Women on the inside don't score high enough. Women on the outside don't score high either but they also don't have the benefit of merit promotion.

2. Give them more information of the opportunities available out there. When I was going to school, I never knew about Pearl Harbor Naval Shipyard.

3. Look into aptitude and place accordingly so those ahead will have a challenge; those behind won't feel discouraged.

4. I don't think women who belong in this field need to be encouraged. They just need to know it is there. Either you have it or you don't.

5. Keep on presenting career seminars which relate to the blue-collar jobs.

6. Encourage the women who are good with their hands in arts and crafts, etc. Tools and repair is an art and a skill.

7. Have rap sessions with apprentices/journeyworkers. Set up tours to job sites. Show good films.

1. Teachers and counselors should talk more about it. Have the unions come and talk to classes, etc.

2. Tell of money, benefits, opportunity to learn new experience.

3. Publicize it more. Present women in trades as a desirable person to be--not an oddity.

4. Have counseling pertaining to possible jobs in apprenticeship.

5. Emphasize that a job in construction does not make you unfeminine.

6. Teach women about EEO/federal laws.

7. Stress that the work is not only hard labor, that you don't have to be a superman.

8. Teach about differences in pay for different jobs.

9. Start with pre-schoolers. Provide opportunities with tools, spatial measurement experiences, books that are non-sexist. Teach girls math and science.

C.6. Survey Question 15 (continued)

Pearl Harbor

8. Have females in the apprenticeship program talk to them.

9. Describe the situation realistically--there are many women and MEN not suited for apprenticeship.

10. Distribute brochures, hold career meetings.

11. Provide literature, information, career fairs--let women take vocational courses, science, and math.

12. Be open to all job trades. Schedule tours, drafting.

13. Make women aware of the apprenticeship program by having women apprentices tell them all about it in informal discussions.

14. Impress upon them that they can do it. Encourage them to take shop classes.

15. Make women aware of program and encourage them to enter.

16. Have more speakers at school to introduce the idea to the students. Not stress non-conforming job, but more the idea that jobs are open and sex is not the determining factor--rather than willingness to learn and work, acceptance of physical differences between men and women, and the economic reasons, present and past, why women have been in blue-collar occupations.

17. Basic needs for apprenticeship should be explicitly programmed. Inform potential candidates of all opportunities.

Hawaii State

10. Inform female students of availability of construction jobs and emphasize the variety and interest of the work.

11. Inform them that this type of career is available--not just home economics and secretarial.

12. Promote shop classes.

13. Improve the program in school.

14. Not necessarily anything. Most women aren't suited for this profession. That's why so many women drop out.

15. Encourage them to take vocational training instead of home economics.

16. Advertise openings.

17. Offer career information and encouragement without pressure.

18. Let them know apprenticeship exists and that it is not unfeminine.

19. Circulate more information about apprenticeship programs.

20. Take women to job sites--show different types of jobs available.

21. Have more information on apprenticeship programs.

C.6. Survey Question 15 (continued)

Pearl Harbor	Hawaii State
In-Program	
18. Make it known to them exactly what is available to help them learn how to take the necessary tests and fill out the forms.	22. Provide encouragement.
19. Allow women to take vocational courses in high school.	23. More advertising.
20. Have guest speakers, brochures.	
21. Familiarize program and aspects of each trade.	
22. Role models should be sent to the schools.	
23. Encourage women to take courses that deal with vocational trades.	
24. Arrange for students to talk with women apprentices.	
25. Let women know of job opportunity. Show slides of women working and tell them how much they can learn from the program.	
26. Have women apprentices visit schools and speak with students at a career information session.	
27. Have speeches from women apprentices.	
28. Tell women of other fields instead of just clerical, nurses, teachers.	
29. Have women apprentices talk to them.	
30. Make them aware of opportunities.	

C.6. Survey Question 15 (continued)

Pearl Harbor	Hawaii State
In-Program (continued)	
31. Talks by women apprentices from different trades to students.	
32. Give all possible information on type of jobs available.	
33. Give them opportunity and information in 9th and 10th grade for more readiness.	
34. Encourage them if they like to work with their hands. Discuss the potentials in the trades. Encourage them to take useful math and trade courses.	
35. Nothing--that's a personal decision.	
36. Stress the fact that women are protected from harassment under federal law.	
Terminations	
1. Advise them of potential courses necessary, tell them it can involve dirty, hard, well-paying work.	1. Lectures, excursions to job sites, career orientation, individual counseling or discussion.
2. Encourage women by telling them the advancement potential and new careers.	2. I don't think they should encourage them, just let them decide.
3. Make sure that they take classes necessary for the trades work such as drafting, physics, and higher math.	3. Provide more detail on the program.
	4. Explain that it's a great opportunity to get steady, well-paid jobs.

C.6. Survey Question 15 (continued)

Pearl Harbor	Hawaii State
Terminations (continued)	
	5. Introduce them to the idea --suggest courses and make sure teachers are responsive and helpful to women in male dominated courses.
	6. Leave the optionsopen. Familiarize females with different programs available.
	7. Make students aware that such programs exist. I was out of school for over 10 years before I heard about it.
	8. Keep male teachers from discouraging us.
	9. That there's a place for women on every job if given a fair chance.
	10. Interview or have female apprentices on hand for discussion. Stress the money which could be made.
	11. Let it be known it is not unfeminine.
	12. Leave it to the individual woman.
	13. Help decide early.
	14. It's the female's decision.
	15. Teach males to respect female efforts. Respect and encourage aptitude.

C.7. Survey Question 16: Suggestions to Employers to Encourage Women to Enter Apprenticeship

Completers

Pearl Harbor

1. Have rap sessions with the MEN and women in the trade entering or thinking of entering.
2. Job fairs.
3. Fairness, equality, non-prejudice.
4. Let them hear speeches by apprentices or mechanics giving both sides. (Encourage those who are still interested after hearing both sides.)
5. If they show interest, expose them to women apprentices.
6. Encourage via personal interviews. Advertise career potential. Do not lessen requirements to accommodate women.
7. Have personnel department put together a program showing the benefits of blue collar work and talk to <u>all</u> their staff.
8. Be very honest yet very supportive--I've heard employers try to scare women with horror stories. They don't look beyond the fact that you are a woman rather than an earnest applicant.

Hawaii State

1. They <u>should not</u> encourage it. The reason why I say this is because we had a few women just come into the program to look for problems with the guys, only to sue to make fast money.
2. State that job openings are open to males and females.
3. Provide job security, more money, and advancement.
4. Give them some help and encouragement on the job.

C.7. Survey Question 16 (continued)

Pearl Harbor	Hawaii State
In-Program	
1. Talk about job opportunity to gain advancement in a man's world and eventually buy a house like a man usually does.	1. Let them know there are jobs for women.
2. Tell them that they will advance faster and get ahead.	2. Tell of benefits.
3. Employers should first accept women into the field--do not make them feel useless.	3. Make announcements or notices prominent and with enough time to comply with application.
4. Give us moral support whether in studies or on the job training.	4. Treat a woman like a woman and find a place where she can be most productive.
5. Don't tell them "It's not women's work" formally or informally. Any woman who can carry around a 2-year-old can lift anything.	5. Not all employers encourage women, but the ones who do generally push for them.
6. Not discourage them.	6. Encourage physical testing.
7. Be realistic--perhaps help them to meet women apprentices for first hand information.	7. Obey federal laws and do not discriminate. Have EEO shop stewards.
8. Explain job opportunities/ wages.	8. Be helpful naturally, not feel that they have to deal with a woman or try to hustle her.
9. Provide literature and information.	9. Hire more women.
10. Encourage tours of various trades and be honest with weight lifting requirements, etc.	10. Hire more women. Minimize harassment. Build child centers. Sponsor educational programs in modern technology.
11. Relate their present job to the apprenticeship program in some way. Tell them to give it a try.	11. Change their attitudes toward women in construction. Offer more careers to women.
	12. Make all aspects of job known and stress physical ability as a strong must. You work hard for the great pay.

12. Provide workshops and information to schools and women's groups.

13. Select more women for the program.

14. Provide speakers who will emphasize willingness to learn and work, economic history of women in blue collar occupations.

15. Inform candidates of opportunities and skills. Have workshops/speakers to companies.

16. Don't glamourize the jobs. Just let them know what they will be doing and what the pay scale is.

17. Let present women in apprenticeship talk to them.

18. Make women do same amounts of work as men. Treat them as equals. Offer them hard facts about what the job entails. Don't make the jobs look easy when it is not.

19. Be helpful and understanding that women have not had the opportunity to take vocational courses in high school. They were forbidden to women when I was in high school.

20. Brochures, pamphlets, guest speakers.

21. Cooperate with school programs to familiarize students with apprenticeship.

22. Tell women how important a job like this would be to help themselves.

13. Assign one journeyworker from start to finish.

14. Give them a chance to do everything. Don't discourage. Apprenticeship instructors should be more friendly; have more practical work.

15. Be made more aware of OFCC and EEO rules for affirmative action and equal job rights.

16. Provide equal types of work--don't just assume that women cannot handle certain types of work.

17. Offer equal opportunity. Let the women prove herself capable.

18. Give the women a chance.

19. Provide job orientation.

20. Have job offerings where only women take the test.

21. Give them a fair chance.

C.7. Survey Question 16 (continued)

Pearl Harbor	Hawaii State
In-Program (continued)	
23. Have existing women apprentices speak to interested employees. Have rap sessions with male employees and supervisors to find out their gripes and fears about female apprentices.	
24. Show them the pay.	
25. Support them in applying for openings.	
26. Make them aware of opportunities.	
27. Have announcements read: "For Female or Male."	
28. Point out advantages and potential of the jobs but also inform them of the less desirable aspects--dirty work, male environment, etc.	
29. Tell the truth regarding pros and cons about apprenticeship. Explain long-term benefits.	
Terminations	
1. Make available all notifications of helpful information. Give encouragement.	1. Equal opportunity.
2. More pay, chances for advancement.	2. Advertise. Let women know they support them and have a positive attitude towards them.
	3. No reason to encourage--let women decide themselves.
	4. Give them a fair chance to prove themselves. Be fair.

C.7. Survey Question 16 (continued)

Pearl Harbor

Hawaii State

Terminations

5. Advancement in salaries.

6. Try to accept women as people who can perform if given a fair chance at a new profession.

7. Let them visit job sites.

8. Hire supervisors who are interested in sharing their trade.

9. Special training programs.

10. Let more women try so others aren't afraid.

11. Accept women. Keep male employees from manhandling us. Realize we also have families to support. Give us a chance.

12. Don't expect a person to know how on the first day of work.

13. Advertise it.

14. Not be pigs.

15. Old companies are against women because of old teachings--women belong at home making babies.

16. Hire more women. Respect their abilities and weaknesses. Placement according to skills.

C.8. Survey Question 17: Persons Encouraging or Discouraging Completion of Apprenticeship

Completers

Pearl Harbor

1. It's funny how everyone became more encouraging after I entered the program.

Hawaii State

1. Female friends in traditional jobs (encouraged)
2. Fellow employees (encouraged)

In-Program

Pearl Harbor

1. Pearl Harbor Apprenticeship Association (encouraged)
2. Cousins (encouraged)

Hawaii State

1. Supervisors discouraged but later encouraged.
2. Co-workers (encouraged)
3. Aunt (discouraged)
4. Instructors and supervisors have been both encouraging and discouraging. I have the impression that they find me challenging and stimulating because I want to learn but hard to relate to because of just being accustomed to interacting with a woman on a professional level.
5. Grandparents (encouraged)

Terminations

1. Co-workers (discouraged)
2. Union officials (discouraged)

C.9. Survey Question 18: Problems Encountered While in Apprenticeship

Pearl Harbor	Hawaii State
Completers	
1. Women working with women.	1. Understanding classroom instruction/assignments as a problem. (Respondent double starred).
2. Failure of supervisors to take me seriously. Also, failure of some junior male apprentices to want to take orders from me.	
3. Locating women's restroom.	
In-Program	
1. Journeyworkers having trouble working with female apprentices.	1. Discrimination by union contractor.
2. Journeyworkers won't explain the work or let me help.	2. Teasing/harassment on the job. (Respondent triple starred).
3. Incompetent teacher.	3. Not being taken seriously.
	4. Lack of sanitary washrooms.
	5. General lack of acceptance of women in construction.
	6. Ability to do work with equal quality and speed.
	7. Teasing/harassment on the job (starred).
	8. Being Caucasian and female.
Terminations	
1. Women working with other women.	1. Journeyworkers having difficulty working with females.
	2. Supervisors working with female apprentices. (Respondent claimed this was a big problem.)

C.9. Survey Question 18 (continued)

Pearl Harbor	Hawaii State
Terminations (continued)	
	3. Not being wanted on the job site.
	4. Harassment, teachers and supervisors having difficulty with females. (Respondent triple checked).
	5. Resistance from journeyworkers to teach me anything.

C.19. Survey Question 19: Coping Assistance Found Helpful in Apprenticeship

Pearl Harbor	Hawaii State
Completers	
1. Availability of apprentice school director.	1. Love and determination.
	2. We need women journey-workers to counsel new apprentices.
In-Program	
1. Discussion with instructors.	1. Educational Opportunity Center--Maui Community College.
2. Speaking with instructors of the program.	2. Some older carpenters tend to be most helpful.
	3. Male apprentices in classroom.
	4. Male friends and union.
Terminations	
	1. Talking with union officials.

C.11. Survey Question 20: Suggestions to Assure That More Women Complete Apprenticeship

Completers

Pearl Harbor

1. A group organized to assist employees with problems at hand to try and help.
2. Form discussion groups on problems, self-help classes, more awareness by management on special problems of women.
3. Make sure they know what they are getting into. Support groups to hash out problems.
4. They should be aware of what they are getting into before they enter the program.
5. Upgrade physical/mental aptitude. Tests; allow applicants to personally view potential job sites and become aware of environment, health hazards.
6. Counseling.
7. It's up to the individual woman involved. She has to be self-motivated to a high degree.
8. The strength and desire to finish comes from within. However, I have seen some women quit who may not have if someone had been there to encourage them when they experienced the low points.

Hawaii State

1. That they do not enter at all.
2. I had extra help from fellow workers and supervisors and was given extra time to study.
3. It's all up to the individual.
4. Be sure they fully understand what they are getting into.

C.11. Survey Question 20 (continued)

In-Program

1. Having all the guys who can't stand working with females shipped off the island. They're the cause of our negative attitudes.

2. Understand that they have responsibilities to family--not only school and homework assignments.

3. Make sure they are ready and can do the job. It makes it hard on some of us when we get thrown back on us about women having tool bags carried for them. We wanted to come into a man's world so we have no right to change their habits. If women are to be expected to be treated as equals, let's spend more time on how to get men to show us all the aspects of the job.

4. I feel many women come into the program with unrealistic attitudes or ideas of the environment.

5. Assure them that physical strength has no predominance in apprenticeship.

6. Prepare them academically. Counsel and encourage while on the job.

7. Stress the fact that thousands would like your job; best-on-the-job training anywhere; money excellent; will help in future jobs.

8. Make better allowances for pregnant women. Tutorial help in physics, math, mechanical drawing.

1. It depends on the individual.

2. Women have an understanding with their spouse or boyfriend before accepting any job working with a lot of men.

3. Make men (both co-workers and supervisors) aware that women are serious and have the right to pursue a trade and that women have the same capabilities as men to do the work. Also, a little more patience with women would be a big help. Don't forget, while my brother took auto shop in high school, I had to take cooking. I did not know the names or uses of tools because of lack of familiarity. It's not easy to become as proficient with an open end wrench as with a spatula until you use one.

4. More funding for job placements.

5. Make sure both unions and contractors obey EEOC regulations.

6. That they don't get laid off first, but if so that some other construction clean up be available.

7. Equal employment counselors, more encouragement and support from union, employers, other female apprentices.

C.11. Survey Question 20 (continued)

Pearl Harbor	Hawaii State
In-Program (continued)	
9. Set their priorities and be sure that the apprenticeship trade is what they want.	8. Be strong.
10. Women should be strong in mind and not be forced into something they know nothing about.	9. Equal employment opportunities by more companies; company/union sponsored child-care centers; rap groups--employers, apprentices, journeyworkers, and counselors; supplementary training in weak areas and physical conditioning.
11. Assure women don't take job only for money. Make them more aware of what will be expected of them.	10. More often attitudes of employers, school instructors and co-workers.
12. Try to teach them and not assume they know the subjects.	11. Make sure the ones who get in can physically handle it. More screening and testing should be done before entering.
13. Being able to relate to fellow apprentices, shop personnel.	12. Build their confidence and make them not afraid to compete with men.
14. I didn't know there was a problem.	13. Before they enter apprenticeship, try to make them more aware of what the field involves. Make familiar with actual job and ability to work with mostly men.
15. Inform women not only good but bad parts of the program. Time involved with school, assignments for homework.	
16. It's an individual decision.	
17. Give them responsibility--don't treat them as if they are helpless women.	
18. More encouragement--make men more aware of females going into blue collar.	14. More encouragement from fellow workers, teachers, employers, and especially men.
19. All apprentices should be required to sign a contract.	15. A special course for male supervisors. Make employers aware of affirmative action.
20. That they be strong in mind and health. Must have a positive attitude.	

C.11. Survey Question 20 (continued)

Pearl Harbor

In-Program (continued)

21. Women leave apprenticeship because of the responsibilities of motherhood--there's nothing to help this problem.

22. More meetings/rap sessions with male workers/supervisors to clear up fears and gripes.

23. Nothing. If they want to give up something good, let them. Let the other women have the chance.

24. Tell them it's hard to find a good paying job like this.

25. Meet with them at least once a year. Get feedback from them.

26. Have incoming or interested women be sure of the shop of their choice--tour of shop, give job description.

27. Making sure those who will be hired really and truly want the job of apprentice.

28. Be sure they have a real understanding of what is expected of them on the job.

29. Individual counseling with counselors, students, etc.

30. Assign us journeyworkers who can teach. Let us do the work instead of letting us watch. We are treated as decorations to the work site or we are delegated to paperwork or "fetch it" jobs. We are excluded from job-related problem discussions.

Hawaii State

16. Not much--this is a make or break situation--if they can't handle the job, fellow workers, and bosses, they don't belong in the trades. We did it--so can they!

17. Maintain a quota system.

18. Having some kind of women's apprentice counseling available for night time school.

19. Nothing. They should be treated equal to the male apprentices.

20. Make sure that we have the job long enough to complete the program.

21. Fair standards with women on job sites.

C.11. Survey Question 20 (continued)

Pearl Harbor	Hawaii State
In-Program (continued)	
31. Make sure they are fully aware of the responsibilities they are assuming upon entering apprenticeship.	
32. Tell the women what they're getting into--honestly.	
Terminations	
1. Better understanding from men that women can do the job.	1. Equal opportunity.
2. Tell them beforehand to take courses in higher math, physics, and mechanical drawing. Provide tutoring. Relate instruction to trade.	2. If possible, place two or more women together on a job. Have unions supply female apprentices with information such as the names and phone numbers of EEO counselors, support groups, etc.
	3. Give them a chance to experience all phases of the program.
	4. Something to better the relationship of the men working with women.
	5. Security (financial) is good.
	6. If she really wants to finish, she will.
	7. More formalized methods of dealing with out-dated attitudes of some trainers.
	8. Take some courses first to provide a hint of familiarity with the situation.
	9. I think you have to work with making men understand first so women are easily accepted.

C.11. Survey Question 20 (continued)

Pearl Harbor

Hawaii State

Terminations (continued)

10. Give us a chance. Treat us equally as the man. Keep their hands off our bodies.

11. Make more jobs available so hours can be put in to finish the program.

12. Change of local attitudes.

13. Get rid of all the old Japanese carpenters.

14. Counseling and group meetings.

15. Provide good teachers.

16. Living and working were a long distance from where classes were held--can't classes be scheduled elsewhere?

17. Make sure classes are worthwhile and that employers are more aware of the various types of experience necessary to earn completion.

REFERENCES

Hawaii Department of Labor and Industrial Relations. Division of Apprenticeship. Annual report of the Apprenticeship Division. Fiscal Years 1974-75, 1975-76, 1976-77, 1977-78, 1978-79, 1979-80, 1980-81, 1981-82. Honolulu.

Hawaii Department of Labor and Industrial Relations. Division of Apprenticeship. (1978, Nov. 4). State plan for equal employment opportunity in apprenticeship programs. Honolulu.

Kane, R., Frazee, P., and Dee, E. (1976, Nov.). A study of the factors influencing the participation of women in non-traditional occupations in postsecondary area vocational training schools. Arlington: RJ Associates, Inc.

Kane, R., Dee, E., and Miller, J. (1977, Dec.). Problems of women in apprenticeship. Arlington: RJ Associates, Inc.

Tuckman, B.W. (1972). Conducting educational research. New York: Harcourt Brace Jovanovich, Inc.

U.S. Department of Labor. Bureau of Labor Statistics. (1983, April). Women at work: A Chartbook. Washington, D.C.: Government Printing Office.

U.S. Department of Labor, Employment and Training Administration. (1977). Apprenticeship: Past and present. Washington, D.C.

U.S. Department of Labor. Office of the Secretary. (1978, May 12). Equal employment opportunity in apprenticeship and training. Washington, D.C.: Federal Register.

White, B. (1984). Women apprentices in Hawaii: A comparison of factors influencing the entrance, participation, and completion of women in two established apprenticeship programs. Ed.D. dissertation, University of Hawaii.

It is the policy of the University of Hawaii to provide equity of opportunity in higher education, both in its educational mission and as an employer. The University is committed to comply with all state and federal statutes, rules and regulations which prohibit discrimination in its policies and practices and which require affirmative action, including but not limited to Title VI and Title VII of the Civil Rights Act of 1964; Section 503 and Section 504 of the Rehabilitation Act of 1973; Section 402 of the Vietnam Era Veterans Readjustment Act of 1974, as amended; Title IX of the 1972 Education Amendments; the Equal Pay Act of 1963; Executive Order 11246, as amended; and the Age Discrimination Act of 1975.